University of Washington Bothell
General Catalog

Academic Year 2018-2019

Purpose

This catalog includes:

- Academic policies
- Program descriptions
- Requirements for all majors and minors.

The information in this catalog is effective as of autumn quarter 2018.

Student Obligation

It is the student's obligation to be informed about the policies and standards contained in this catalog.

All efforts are taken to ensure catalog accuracy. However, the catalog is not an irrevocable contract between the student and the University. The University's total liability for claims arising from a contractual relationship with the student in any way related to classes or programs shall be limited to the tuition and expenses paid by the student to the University for those classes or programs.

In no event shall the University be liable for any special, indirect, incidental, or consequential damages, including but not limited to, loss of earnings or profits.

University's Right

Due to the rapidly evolving programs and policies at the University, UW Bothell reserves the right to modify course and program offerings, University policies, and other information at any time, without prior notification.

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I. About the University

Campus History

The story begins in the mid-1980s when community, business, and education leaders recognized the increasing need for higher education in the rapidly growing Puget Sound region. In its 1987 Master Plan, the Washington State Higher Education Coordinating Board gave the University of Washington the responsibility of developing branch campuses. In 1990, the University of Washington Bothell was created to meet that need in the northeast Puget Sound area.

For 10 years, UW Bothell was located in a small business park. In 2000 we moved to our current location on 128 acres of picturesque land that was once home to cattle and dairy farming on the Boone-Truly ranch.

The University of Washington Bothell has grown into a unique and beautiful campus. Buildings are situated between towering Douglas fir and Western Red Cedar trees. The facilities house state-of-the-art technology to assist faculty and staff. The northeast portion of the campus contains 58 acres of high-functioning wetland.

The University offers many academic programs and certificates at the undergraduate, post-baccalaureate and graduate levels. The programs are designed to serve a diverse population of students who have just completed high school, who have completed some college study and are seeking to complete their baccalaureate degrees, initiate post-baccalaureate studies, or pursue courses for personal development.

In accordance with the traditions of the University of Washington, we are dedicated to providing responsive, accessible programs that proudly uphold traditional University of Washington standards of quality.

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UW Bothell campus when it was the Boone-Truly Ranch.

UW Bothell campus today.

Equal Opportunity

The University of Washington reaffirms its policy of equal opportunity regardless of race, color, creed, religion, national origin, sex, sexual orientation, age, marital status, disability, or status as a disabled veteran or Vietnam era veteran. This policy applies to all programs and facilities, including, but not limited to, admissions, educational programs, employment, and patient and hospital services. Any discriminatory action can be a cause for disciplinary action.

Discrimination is prohibited by Presidential Executive Order 11246 as amended, Washington State Gubernatorial Executive Orders 89-01 and 93-07, Titles VI and VII of the Civil Rights Act of 1964, Washington State Law Against Discrimination RCW 49.60, Title IX of the Education Amendments of 1972, State of Washington Gender Equity in Higher Education Act of 1989, Sections 503 and 504 of the Rehabilitation Act of 1973, Americans with Disabilities Act of 1990, Age Discrimination in Employment Act of 1967 as amended, Age Discrimination Act of 1975, Vietnam Era Veterans' Readjustment Assistance Act of 1972 as amended, other federal and state statutes, regulations, and University policy. Coordination of the compliance efforts of the University of Washington with respect to all of these laws and regulations is under the direction of Dr. Helen Remick, Assistant Provost for Equal Opportunity, Equal Opportunity Office, University of Washington, Box 354560, 4045 Brooklyn Ave., N.E., Seattle, Washington, 98105-6261, telephone 206.685.3263/voice or 206.543.6452/TTY or email eoo@uw.edu.

The University of Washington Bothell is committed to providing equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodations, please contact Disability Support Services at least ten days prior to the event at 425.352.5307, TDD 425.352.5303, FAX 425.352.5114, or email uwbdrs@uw.edu.

Non-Discrimination Policy

The University of Washington, as an institution established and maintained by the people of the state, is committed to providing equality of opportunity and an environment that fosters respect for all members of the University community. This policy has the goal of promoting an environment that is free of discrimination, harassment, and retaliation. To facilitate that goal, the University retains the authority to discipline or take appropriate corrective action for any conduct that is deemed unacceptable or inappropriate, regardless of whether the conduct rises to the level of unlawful discrimination, harassment, or retaliation.

Accreditation

The three-campus University of Washington is accredited by the Northwest Association of Schools and Colleges and is a member of the Association of American Universities. Individual schools and colleges are members of the various accrediting associations in their respective fields.

II. Mission & Goals

Our Mission

The University of Washington Bothell holds the student-faculty relationship to be paramount. We provide access to excellence in higher education through innovative and creative curricula, interdisciplinary teaching and research, and a dynamic community of multicultural learning.

Our Goals

The University of Washington Bothell is committed to achieving its goals and promotes the on-going review of our outcomes, organizational structures, and processes that support its mission and goals.

- Serve college age and established adult students, as well as the community at large, by providing access to a premier institution of higher education.

- Emphasize and develop critical thinking, writing, and information literacy, in order to graduate students with life-long learning skills.
- Actively recruit and support outstanding faculty scholars with a passion for communication.
- Build an inclusive and supportive community of learning and incorporate multicultural content and diverse perspectives on ethnic and racial groups, gender, sexual orientation, social class, and special needs.
- Encourage and support collaborative, interdisciplinary, and cross-program initiatives.
- Provide quality curricula by making use of the best of educational technology in support of teaching and learning.
- Attract and support an internationally diverse student body and a nationally recognized faculty and staff.
- Create and support excellence in student affairs, academic services, such as library, Writing and Communication Center, computing services, and physical facilities.
- Foster productive relationships with the employment community and promote a strong public service commitment.

21st Century Campus Initiative

The 21st Century Campus Initiative: UW Bothell Priorities Plan 2008-2020 outlines seven priorities to increase the opportunities for students to attain the knowledge, skills and experiences that will prepare them for leadership roles throughout the state and beyond.

The initiative builds on our student-centered traditions, calling for an enhanced focus on creating a diverse and inclusive learning environment; using innovative, effective teaching methods; and addressing important challenges of the 21st Century in the classroom and through institutional practices. The theme of sustainability is critical to our global future and is central to the values, vision and economic interests of our students, state and region. Addressing this vital issue is a key priority of our plan and will become a signature focus for this campus.

To fulfill our vision we must collaborate with a broad range of community partners in addressing workforce needs, as well as local and global challenges. Closer community ties will enable us to better understand the skills and programs students and employers need, while enriching the education of our students by providing real-world opportunities to learn from and give back to local communities.

The seven priorities for the 21st Century Campus Initiative are:

- Growth
- Resourcefulness
- Diversity
- Student-Centered
- Community
- Innovation
- Sustainability

III. Admission

Admission Policy

The University of Washington Bothell seeks students who can benefit from its wealth of academic and cultural opportunities and will contribute to the campus environment. Choosing students from an academically talented group of applicants requires a selection process that looks beyond grades and standardized tests.

While grades and standardized tests are important, they tell only part of a student's story. UW Bothell uses a holistic application review process to identify well-rounded and highly qualified students by learning more about each applicant’s story and taking into account many aspects of a student's achievements and personal history. Factors considered include rigor of curriculum; grades and test scores; activities or accomplishments; educational goals; life experiences, such as growing up in an unusual or disadvantaged environment;

family educational background and socioeconomic status; special talents; and cultural awareness. The list is not exhaustive, and the factors are not of equal weight; moreover, no single factor is sufficient to confer admission.

It is the student's responsibility to ensure the application is complete and true, and to be aware of all pertinent admission and application requirements. Failure to disclose complete and accurate information (e.g. all colleges/universities attended) and/or failure to submit all required application materials may result in the denial of admission or subsequent dismissal from the University.

How to Apply

Application to the UW Bothell campus is a separate process from application to the UW Seattle or UW Tacoma campuses and requires submission of a separate online application, transcripts, and other required records. Students must apply online at http://www.uwb.edu/admissions/apply.

Appeal of Admission Decisions

Students who are denied admission to UW Bothell or placed on the waiting list may request further consideration by presenting a written petition and additional information in support of their application to the Office of Admissions at uwbinfo@uw.edu.

First Year Students

A first year student is one who has not earned college-level credit following the summer of his or her high school graduation (including students with Running Start, College in the High School, Advanced Placement, and International Baccalaureate credit).

First Year Admission Requirements

1. Minimum cumulative GPA of 2.0
2. Successful completion of the College Academic Distribution Requirements [CADRs]
3. Proof of English language proficiency (if required; see the section ***English Language Proficiency Requirement*** for more information)

Application Checklist

1. Completed application, including required writing section(s)
2. Non-refundable application fee ($60 domestic students, $75 international students)
3. Unofficial high school transcript(s) from all schools attended
4. Official transcripts from each college (if applicable)
5. Official SAT or ACT scores (scores are valid for 5 years)

College Academic Distribution Requirements [CADRs]

In accordance with Washington Student Achievement Council [WSAC] requirements and to ensure that students entering UW Bothell are prepared to succeed in college, all first year students are required to complete a minimum level of preparation in six subject areas through high school or college course work prior to entering the University.

In general, five quarter credits (or three semester credits) in a college-level course equal one year of high school study. If only a portion of a CADR was completed via high school course work, the balance of the requirement must be completed via college course work. A college course may be used to satisfy both an admission requirement and a UW Bothell graduation requirement.

<u>English Composition/Literature: 4 Years</u>

If taken in high school:

Four years of study are required, at least three of which must be in college-preparatory composition or literature.

- One of the four years may be satisfied by courses in drama as literature, public speaking, debate, journalistic writing, business English, or English as a Second Language (ESL).
- Courses that are generally not acceptable include those identified as remedial or applied (e.g., acting, basic English skills, developmental reading, library, newspaper

staff, remedial English, review English, vocabulary, yearbook/annual).

- English courses taken in another country are considered equivalent to ESL unless taken in Australia, Canada, Ireland, New Zealand, or the United Kingdom.
- International Students: Four high school years of Composition and/or Literature courses in the student's native language satisfy this requirement.

If made up through college course work:
College course work must be at the 100 level or higher. For the composition/literature component, generally any course with an English or Writing prefix is acceptable.

- One of the four years may be satisfied by a college course in speech, drama as literature, journalistic writing, business English, ESL, or engineering/technical writing.
- Courses such as developmental or speed reading, vocabulary, or remedial English are not acceptable.

Mathematics: 3 Years
If taken in high school:
Three years of study are required, at least at the level of algebra, geometry, and second-year algebra.

- An algebra course completed in the last year of junior high school may partially satisfy the requirement if the second-year algebra is completed in secondary school.
- Arithmetic, pre-algebra, business math, and statistics will not satisfy the requirement.
- Mathematics course work taken in the senior year may overlap with the Senior Year Math-Based Quantitative requirement.

If made up through college course work:
If high school preparation in mathematics was insufficient, one of the courses listed below is required:

- **Intermediate Algebra**: At Washington community colleges, qualifying courses in intermediate algebra are listed as equivalent to MATH 098 in the University of Washington Equivalency Guide. The course must be completed with a grade of 'C' (2.0) or better, even though it does not transfer to UW Bothell as college credit, and the grade earned in the course is not used in computing the transfer GPA.
- **Trigonometry**: The course must be completed with a grade of 'C' (2.0) or better.
- **Mathematics courses with intermediate algebra as a prerequisite:** This includes any higher-level math courses such as elementary functions, calculus, and beyond. Courses in statistics, logic, or computer science do not satisfy the mathematics requirement.

Social Studies: 3 Years
If taken in high school:
Three years of study are required in history or in any of the social sciences (e.g., anthropology, contemporary world problems, economics, geography, government, political science, psychology, sociology). Religion courses, consumer economics, student government, or community service do not satisfy the requirement.

If made up through college course work:
Courses in the social sciences (e.g., anthropology, economics, ethnic studies, history, philosophy, political science, psychology, sociology) satisfy the requirement.

Lab Science: 2 Years
If taken in high school:
Two years of lab science are required. At least one of the two years must be in an algebra-based science course.
Lab science course work taken in the senior year may overlap with the Senior Year Math-Based Quantitative requirement.

If made up through college course work:
College-level science courses with a lab satisfy the requirement. At least one course must be an algebra-based science course with a lab.

World Languages: 2 Years

If taken in high school:

Two years of study in the same language are required.

- The world language requirement will be considered satisfied for students who complete more than half their primary and secondary education in school(s) a) where English was not the language of instruction or b) in countries other than the United States, Australia, Canada, Ireland, New Zealand, and the United Kingdom.
- International students who entered the U.S. education system prior to the seventh grade must satisfy the world language requirement.
- Any natural language that has been formally studied may be used to satisfy this requirement, including American Sign Language (AMESLAN, the language of the deaf community) and languages no longer spoken, such as Latin and ancient Greek. However, neither computer 'languages' nor forms of deaf signing aside from AMESLAN are acceptable.
- A world language course taken in the eighth grade may satisfy one year of the requirement if the second-year course is completed in high school

If made up through college course work:

Students who have never studied a world language will need to complete ten quarter credits (or six semester credits) of a single world language. A student who studied a world language for one year in high school needs to complete only the second five quarter credits (e.g., FREN 102) or the second three semester credits of a first-year language sequence in college.

If using an exam:

Students who have not completed high school or college course work in a world language can demonstrate their proficiency using test scores.

- **Advanced Placement [AP]:** A score of 3, 4, or 5 on a College Board Advanced Placement world language exam will be awarded 5, 10, or 15 transfer college credits and satisfy the world language requirement.
- **International Baccalaureate [IB]:** A score of 5, 6, or 7 on an International Baccalaureate Program Higher Level world language B exam will be awarded 5, 10, or 15 transfer college credits and satisfy the world language requirement.
- **University of Washington Placement:** Placement into the third quarter of a world language by a UW Placement Exam satisfies the world language requirement. Contact the UW Seattle Testing Center for information about taking a world language placement exam. If the Testing Center does not offer a test for a language, it may be possible to have proficiency level evaluated by a UW faculty member in a one-on-one test; contact the appropriate UW language department to inquire about this possibility. Placement tests taken at other colleges will not satisfy the world language requirement.

Fine, Visual, or Performing Arts: 1/2 Year

If taken in high school:

One-half year or one trimester of study is required in the fine, visual, or performing arts, to be chosen from art appreciation, band, ceramics, choir, dance, dramatics performance and production, drawing, fiber arts, graphic arts, metal design, music appreciation, music theory, orchestra, painting, photography, print making, or sculpture. Courses generally not acceptable include architecture, color guard, creative writing, drafting, drill team, fashion design, world languages, interior design, sewing, speech, web design or graphics, woodworking, and yearbook.

If made up through college course work:

Two quarter credits (or two semester credits) satisfy the requirement, chosen from art, art history, cinema/filmmaking, dance, drama (except drama as literature), music, or photography. Courses in

architecture are generally not acceptable, except for those in architectural history.

Senior Year Math-Based Quantitative Course: 1 Year

If taken in high school:

One year of math-based quantitative course work is required in the **senior** year. Any of the following courses will meet this requirement if taken during 12th grade:

- The third-year level of math, such as intermediate algebra (Algebra II)
- Higher level math, such as pre-calculus, math analysis, or calculus (may be completed prior to 12th grade)
- A math-based quantitative course (statistics)
- An Algebra-based science course (this may also count toward the lab science requirement)
- An AP Computer Science course

If made up through college course work:

College courses in math (e.g., pre-calculus, calculus, statistics) or algebra-based science satisfy this requirement.

Electives in CADR Subjects: 1/2 Year

If taken in high school:

One-half year of study is required. Academic electives are courses in any of the six subject areas defined above beyond the minimum number of years specified above.

If made up through college course work:

Three quarter credits (or two semester credits) completed in any of the six subject areas described above satisfy this requirement.

Grading Restrictions

In general, a student must earn a passing* grade as defined by the issuing school's grading scale to satisfy a College Academic Distribution Requirement [CADR]. A grade of 'Pass' in a course taken on a 'Pass/Not Pass' basis is acceptable; however, students completing CADR through college course work are strongly encouraged to choose a letter or numerical grade, because they may later want to apply the course(s) towards major and/or University graduation requirements, for which grading restrictions pertain.

*While a passing grade is the absolute minimum grade required for a CADR to be satisfied, this does not reflect the grades required of a competitive applicant to UW Bothell.

Advanced Placement, International Baccalaureate and A-Level/AS-Level Credit

UW Bothell will award college credit for students who receive the required minimum scores on Advanced Placement, International Baccalaureate, and A-Level/AS-Level exams. Minimum exam scores vary based on subject area; please review the website for detailed information.

Running Start, College in the High School, and Tech Prep

UW Bothell will review credits earned through Running Start, College in the High School, and Tech Prep for transferability. An official transcript from the college must be submitted to UW Bothell before the credits can be considered.

Homeschooled Students

UW Bothell welcomes homeschooled students to apply for admission. Homeschooled students are expected to meet CADRs, submit official SAT or ACT test scores, and submit an official transcript documenting all course work studied between grades 9 - 12.

Homeschooled students must present a homeschool transcript that includes course titles of each subject studied, duration of study, a short description of content, and grade or assessment of performance. Preferably, courses completed at home would adhere to a nationally recognized homeschool curriculum.

CADRs completed at a regionally accredited college, university, or high school do not require further validation; official transcripts are required. Homeschool course work in the four CADR subject areas listed below must be validated through testing

or college course work. Official test scores must be submitted by the priority application date.

- **English Composition/Literature**
  Validated by SAT or ACT sub scores
- **Mathematics**
  Validated by SAT or ACT sub scores
- **Science**
  Validated by ACT sub score. If using SAT for admission, further validation is required.* Only one exam in chemistry, biology or physics is required.
- **World Language**
  Further validation required*

**SAT Subject Tests, Advanced Placement exams, International Baccalaureate exams, college course work*

Please note: UW Bothell cannot provide minimum required scores, as each homeschooled student presents a unique case. Each student is assessed holistically in the context of a comprehensive record.

Transfer Students

A transfer student has attended a college or university after high school graduation (summer excluded) but has not yet earned a baccalaureate degree (Students who have already earned a baccalaureate degree should apply as a post-baccalaureate student).

Transfer Admission Requirements

1. Minimum 2.0 cumulative GPA in all attempted college transfer course work/ secondary-level course work
2. Core Subject Requirements or College Academic Distribution Requirements [CADRs]
3. Proof of English language proficiency (if required; see the section ***English Language Proficiency Requirement*** for more information)

NOTE: Students applying directly to majors must complete additional requirements to be considered for admission. Further details may be found at *www.uwb.edu/admissions/transfer*.

Application Checklist

1. Completed application, including required writing section(s)
2. Non-refundable application fee ($60 domestic students, $75 international students)
3. Official transcript(s) from all colleges/universities attended
4. Official high school transcript(s) (if applicable)
5. Official SAT or ACT scores (for students with fewer than 40 transferable credits)

CADRs and Core Subject Requirements

Students with fewer than 40 transfer credits must complete a minimum level of preparation in six CADR subject areas through high school or college course work prior to entering the University. Students with more than 40 transfer credits must complete minimum University core subject requirements. An academic associate degree does not automatically satisfy the core subject requirements.

In general, five quarter credits (or three semester credits) in a college-level course equal one year of high school study. If only a portion of the CADR or University core requirement was completed via high school course work, the balance of the requirement must be completed via college course work. A college course may be used to satisfy both an admission requirement and a UW Bothell graduation requirement

All transfer students must have a minimum cumulative GPA of 2.0 to be considered.

University Core Subject Requirements
(Required for students with more than 40 transfer credits)

Subject	If completed in high school	If completed in college
Mathematics	3 years including completion of Algebra II	Completion of Intermediate Algebra with minimum GPA of 2.0
World Languages	2 years of the same language	10 credits of the same language or completion of 102 level

College Academic Distribution Requirements (CADRs)

See the ***College Academic Distribution Requirements [CADRs]*** section in this catalog for more detailed information on these requirements.

Grading Restrictions
In general, a student must earn a passing* grade as defined by the issuing school's grading scale to satisfy a College Academic Distribution Requirement [CADR]. A grade of 'Pass' in a course taken on a 'Pass/Not Pass' basis is acceptable; however, students completing CADR through college course work are strongly encouraged to choose a letter or numerical grade, because they may later want to apply the course(s) towards major and/or University graduation requirements, for which grading restrictions pertain.

*While a passing grade is the absolute minimum grade required for a CADR to be satisfied, this does not reflect the grades required of a competitive applicant to UW Bothell.

Applicability of Transfer Credit to Degree Requirements
The Office of Admissions has the authority to make decisions on transfer of credit to the University and the application of transfer credits to fulfill University core subject, general education and proficiency requirements. Academic program offices have the authority to determine application of transfer credits to fulfill major requirements. During the first quarter of enrollment, a student should meet with an academic advisor to plan a program of study and learn how their transfer credits will apply towards degree requirements.

Academic Credit
Guidelines governing the awarding of undergraduate transfer credit at UW Bothell are listed below. In general, it is University policy to accept credits earned at regionally accredited institutions, provided that such credits have been earned through college-level courses (see exceptions below). For courses taken at a Washington community college, UW Bothell follows the listing of transferable courses published in the University of Washington Equivalency Guide:
www.admit.washington.edu/EquivalencyGuide.

A maximum of 90 credits from lower-division course work (100 and 200 level courses) may be applied toward the credits required for the baccalaureate degree. Students can petition their program to transfer additional credits beyond 90 lower-division credits to apply toward their major. No more than 135 transfer credits (lower or upper division) may be accepted to count toward a baccalaureate degree.

Notable Restrictions on Transfer Credit

College in the High School
Additional credit restrictions may apply when students enrolled in high school have been awarded college-level credit by a college or university other than the University of Washington, and the course work was completed on the high school campus rather than the college campus.

Extension Credit from Other Schools
No more than 45 credits earned as extension credit from other schools may be applied toward a UW Bothell degree. Military credit, discussed below, is included in the 45 extension credit limit.

Guidance/Personal Development
A maximum of 3 credits is awarded for courses in this area as part of the 15 credits allowed for vocational/technical courses (see below).

Military Credit
Credits earned in Armed Forces Training Schools [AFTS] and through USAFI and DANTES may not exceed 30 credits and are included in the 45 extension credit limit. Official transcripts or DD-214 or DD-295 forms must be submitted, and credit will not be awarded until after the student has enrolled. Scores received in such course work are not included in the transfer GPA. No credit is awarded for Military Occupational Specialty [MOS] programs. Regionally accredited military schools are evaluated under the same guidelines as all other regionally accredited two- and four- year schools.

Native Language
First-year (elementary) or second-year (intermediate) world language credit is not granted either by examination or by course completion in a student's native language. "Native language" is defined as the language spoken in the student's home during the first six years of his or her life and in which he or she received instruction through the seventh grade.

Parallel / Overlapping Content
If a department considers two of its courses to have overlapping content, credit will be awarded for only one. For example, credit is granted for either CHEM 120 or CHEM 142, not both. Other departments in which such overlapping courses occur include Astronomy, Computer Science, Economics, Genetics, Geological Sciences, Linguistics, Physics, Psychology, and Statistics.

Out-of-Sequence Courses
Credit is not awarded for prerequisite courses in mathematics or world languages completed after a more advanced-level course has been completed. For example, students will not be awarded credit for Spanish 102 if it was taken after Spanish 103.

Physical Education
No more than 3 quarter credits will be allowed for physical education activity courses.

Repeated Courses
The transfer GPA is calculated using the repeat policy of the home institution. In the case that a student takes a course at one college, and then repeats it at another college, and then transfers to UW Bothell, the most recent grade will be included in the transfer GPA calculation.

ROTC Credit
Credits earned in first- and second-year military training courses may not be counted in the basic 180 credits that are required for graduation. Some third- and fourth-year courses may count, depending on the institution the student attended previously.

Senior Residency Requirement
The University generally requires that at least the last 45 of final 60 credits of a baccalaureate degree be completed in residence at UW Bothell.

Vocational/Technical Credits
A maximum of 15 vocational/technical quarter credits (or 10 semester credits) may be awarded. Courses in this category are those which would ordinarily provide specialized training for an occupation (e.g., allied health, bookkeeping, electronics, or physical therapy assistant). When allowed, these credits will apply only toward the elective credit component of a baccalaureate degree at UW Bothell. Such courses are not included in the transfer GPA.

World Language Courses
Students who have completed two or more years of a world language in high school receive no college credit for an entry-level course (e.g., FRENCH 101) in

the same language when that course is completed after matriculation at the University. Transfer students who complete such a course before matriculation at UW Bothell are eligible to receive transfer credit.

Courses receiving no credit

The University reserves the right to deny credit for courses that are not compatible with those offered in its baccalaureate degree programs. Some general categories of courses never receive transfer credit. Examples include:

- Courses below college level (numbered below 100 or development classes, e.g. English 100)
- Repeated courses or courses with duplicate subject content will only receive credit once
- Courses that provide instruction in a particular religious doctrine
- Math courses below college level (e.g. basic math, elementary and intermediate algebra)
- Courses offered for non-credit continuing education units
- Remedial English (e.g., reading, vocabulary development, grammar, speed reading, or any courses that are preparatory to an institution's First Year Composition course)
- Courses providing instruction in English as a Second Language (100-level or above) or English courses taken at an institution where English is not the primary language of instruction
- Remedial courses in any academic discipline (100-level and above)
- Lower division military science courses
- Non-academic/vocational-technical courses beyond the 15 credit limit
- Examinations offered by the College-Level Examination Program [CLEP]
- Courses taken at unaccredited institutions or at any institution that did not hold at least candidacy status with its regional accrediting association when the course work was taken

Special Categories for Undergraduate Admission

Non-Matriculated Students

Non-Matriculated status is used by non-degree seeking students at UW Bothell. Although a student enrolled in a non-matriculated status cannot earn a degree, a grade is earned and full credit is awarded and recorded on the student's University of Washington transcript. Credits earned by a non-matriculated student usually transfer to other institutions. If a student is later accepted into a matriculated status at UW Bothell, courses earned as a non-matriculated student may be applied to undergraduate degree requirements, with some restrictions. Non-matriculated students are enrolled as space permits.

Returning Students

A UW Bothell student who has been away for more than one quarter (excluding summer) must submit a returning student application and pay a non-refundable $60 application fee by the application priority date. Students should contact their previous academic program to verify any additional requirements. Returning non-matriculated students should complete the non-matriculated student application, not the returning student application.

Post Baccalaureate Students

Post-baccalaureate is a matriculated status describing students who have completed one or more baccalaureate degrees and are working toward another baccalaureate degree. The application of previous courses toward graduation requirements will be determined by program faculty and advisors. Students are not eligible to earn a second baccalaureate degree in the same field of study as any previously earned baccalaureate degree(s).

International Students

An international student is a student who is not a United States citizen or permanent resident and plans to attend a college, university, or other post-secondary education institution in the U.S. This includes students that hold U.S. visas as students, exchange visitors, or other nonimmigrant classifications.

International students who have not completed any college credit after completing secondary school should apply as an international first year student. Please see the section ***First Year Students*** for more information about applying as a first year student.

International students who have completed college course work after completing secondary school, regardless of the amount of credits earned, should apply as an international transfer student. Please see the section ***Transfer Students*** for more information about applying as a transfer student.

International students who have completed one or more baccalaureate degrees and are working toward another baccalaureate degree should apply as an international post-baccalaureate student.

International Transcripts
The UW Bothell Office of Admissions evaluates all transcripts from both international and domestic institutions. Transcripts issued in any language other than English must be accompanied by a certified literal translation in the same format as the originals. It is the responsibility of the student to arrange for transcript translation, if required. For translations to be considered official one of the following must be met:

- The translator must be certified by the American Translators Association or corresponding body in the originating country,
- Or the translator must have a master's degree in Translation or Interpretation,
- Or the translation must be completed by the issuing institution.

Financial Statement
All international students are required to submit a Declaration of Finances along with an official bank statement dated within six months of the application period. In order for the UW Bothell Center for International Education to process an I-20, international students must submit documentation verifying they have sufficient funds to attend the University.

English Language Proficiency Requirement

Proof of English language proficiency is required for all students who did not complete most of their primary and secondary education in the United States, Australia, Canada, Ireland, New Zealand, or the United Kingdom. Students who are required to prove English language proficiency are exempt from the World Languages requirement. Determining English language proficiency is at the discretion of UW Bothell.

English language proficiency must be proved by one of the following methods:

NOTE: Students applying to Computer Science and Software Systems, Computer Engineering, or Applied Computing may have different requirements. To learn more visit the program website at www.uwb.edu/css/admission.

1) English Language Proficiency Exams

Provide official scores for one of the following exams. The exam must be taken within 2 years of the anticipated enrollment date at UW Bothell. Official scores must be sent directly to UW Bothell from the testing agency (UW Bothell's institution code for the TOEFL is 9964).

	TOEFL Score	IELTS Score
Satisfies English Language Proficiency Requirement	83	6.5
Admission requires completing specified section(s) of BWRIT within the First Two Quarters at UW Bothell	76-82	6.0
Does not satisfy English Language Proficiency Requirement	Below 76	5.5

2) 90 U.S. College Credits*

Meet **ALL FOUR** requirements at a regionally accredited institution in the U.S.:

1. Earn a minimum 2.75 transferable coursework GPA **AND**
2. Earn a minimum grade of 3.0 in the equivalent of *UW ENGL 131 English Composition* **AND**
3. Earn a minimum grade of 3.0 in the equivalent of *UW ENGL 141 Writing from Research* **AND**
4. Complete 90 transferable quarter credits (or 60 transferable semester credits)

NOTE: We strongly recommend completion of requirements 1, 2 and 3 at the time of application. See the University of Washington Equivalency Guide for equivalent English courses at Washington community colleges.

3) SAT/ACT and U.S. High School English

Complete a minimum of four years of high school English in the United States* with grades of 3.0 or higher each year ***and*** earn a minimum score on one of the following tests:

Qualifying Test	Minimum Score
SAT Critical Reading	500
SAT Writing	500
ACT English	21

****English composition and literature courses taken in Australia, Canada, Ireland, New Zealand or the United Kingdom may also satisfy the requirement.*

4) U.S. Baccalaureate / Master Degree

Earn a baccalaureate degree with at least 90 transferable quarter credits (or 60 transferable semester credits) completed at a regionally accredited institution in the United States; or earn a master's degree or higher from a regionally accredited institution in the United States.

Graduate

The University of Washington Graduate School is responsible for determining the requirements for admission to graduate study. Within the limit imposed on overall enrollment in the Bothell campus, admission to a specific graduate program is limited to the number of students for whom faculty, staff, and facilities can provide graduate instruction and research guidance of high quality. Each graduate student must be admitted into a specific graduate program. The Graduate School does not permit general graduate enrollment.

Graduate Admission Procedure

Prospective graduate students must meet the following minimum requirements:

- Hold the minimum equivalent of a four-year baccalaureate degree from a regionally accredited college or university in the U.S. or its equivalent from a foreign institution or a

Bologna bachelor's degree with a minimum of 180 European Credit Transfer System (ECTS) credits.

- Also acceptable: hold a Master's degree, a doctoral degree (Ph.D., D.Phil.), or a professional degree (M.D., J.D., D.V.M., etc.) from a regionally accredited college or university in the U.S. or its equivalent from a foreign institution.
- All students confirming enrollment must provide a transcript and degree statement for verification.
- Have earned at least a 3.0 grade-point-average (on a 4 point scale) from a regionally accredited college or university in the U.S. or its equivalent from a foreign institution for the last 90 graded quarter credits or 60 graded semester credits.
- Graduate programs may consider an applicant with a GPA below a 3.0. Graduate programs must submit an admission petition to the Dean of the Graduate School before an offer is made.
- Some graduate programs will have additional admission requirements and may require a higher grade-point-average.

English Proficiency:

- Applicants whose native language is not English must demonstrate English language proficiency. The most competitive applicants will demonstrate a higher level of English proficiency and will have attained the **recommended score** to satisfy the Graduate School's English Language Proficiency (ELP) requirement.
- An applicant who does not meet the **minimum required score** will not be considered admissible by the Graduate School. The Graduate School does not offer conditional admissions to students who have not yet met the minimum English Language Proficiency requirement.
- *Please note*: some graduate programs may require a **higher score** than the Graduate School's minimum or recommended scores.

	TOEFL iBT	**IELTS**[ii] Only IELTS test dates prior to June 1, 2017, will be accepted	**TOEFL pBT**
Minimum Required Score (ELP Required)	80	6.5	500
Recommended Score (ELP Satisfied)	92 or higher	7.0 or higher	580 or higher

Citizenship and Visa Status

The Graduate School accepts applications from U.S. citizens, permanent residents (green card holders), immigrants and international applicants. Undocumented individuals are eligible for admission to any graduate program at the University of Washington. Graduate School admission requirements and application procedures are the same for all applicants regardless of citizenship and visa status.

Once an international student planning to study on an F-1 or J-1 student visa has been admitted and has accepted their offer, they must provide documentation to show proof of adequate financial support.

Regarding F-2 dependent visa holders, a June 2015 US immigration rule permits dependents (F-2) of international students to engage in study at SEVP-certified schools in the U.S., as long as they are enrolled in part-time study. Although the F-2s can only study part-time, that part-time study can result in the attainment of a degree. However, the F-2 ***would not be eligible for any employment, including on-campus, CPT, or OPT.*** At the University of Washington Graduate School, if an F-2 wants to enroll in a full course of academic study (10 credit

minimum), they must apply for and ***obtain approval*** to change their nonimmigrant classification to F-1 or J-1. For further information on this new rule, refer to the Department of Homeland Security website.

Admissions Procedures
Graduate admission procedures vary by institution. At the UW, graduate admissions is decentralized. So although the Graduate School works closely with graduate programs on technical, administrative and policy issues, individual graduate programs have a great deal of autonomy.

The role of the **Graduate School** in graduate admissions:

- establish minimum admission requirements
- support the online application for graduate study at the UW
- process requests for I-20 and DS-2019 visa applications
- verify degrees of applicants who accept an offer of admission
- evaluate English proficiency requirement for non-native English speakers

The role of a **graduate program** in graduate admissions:

- establish admission requirements for a degree program
- set application deadlines
- decide what application materials are required
- review applications
- make admission decisions
- notify applicants of admission decisions

Special Categories for Graduate Admission

Visiting Graduate Students
Visiting graduate student status allows students who are actively pursuing a graduate degree at another college or university to take graduate courses at the University of Washington and transfer a limited number of credits back to their home institution. (Acceptance as a visiting graduate student does not confer priority for later admission to a graduate program at the UW.) The length of enrollment is determined by the number of quarters approved by the home institution and the UW graduate program that admits the visiting graduate applicant. Students may hold visiting graduate status in only one graduate program at a time and may not hold any other student status while enrolled as a visiting graduate student.

International students who do **not** plan to enroll full-time at the University of Washington during their visit, but instead plan to "to participate in full-time supervised research and work-based learning experiences at the University of Washington," must refer to the Visiting International Student Internship & Training (VISIT) program.

Citizenship and Visa Status
U.S. citizens, permanent residents, immigrants, and international applicants are welcome to apply for visiting graduate status. (International applicants requesting an F-1 or J-1 visa must meet the UW's financial ability requirement to show that they have adequate funding to cover living costs and tuition and campus fees.)

Information specific to J-1 Visiting Graduates
The majority of Visiting Graduates at the UW attend in the J-1 Visa Exchange Visitor Category because they are receiving over 50% of their funding from their home country government; home institution; US government organization; international organization; and/or a UW department.

Submit a Visiting Graduate application (you must upload college or university transcripts into your application).

After you receive an offer from a UW department:
Demonstrate sufficient funds for your entire intended period of study, with at least 51% coming from funds *other* than yourself or your family sponsor (example: funds from a home country government or international organization or UW department).

Demonstrate English Proficiency as required by the U.S. Department of State. All J-1 exchange visitors — including Visiting Graduates — must demonstrate the

sufficient proficiency in the English language, so they can successfully participate in their programs and to function on a day-to-day basis. **This includes** those who are native speakers of English.

Complete the DS-2019 request form (for J visa application) and upload it into your application's Pre-Registration page.
Maintain appropriate insurance during your entire period of study; follow all instructions on the International Student Service's webpage.

Admission Requirements
Prospective visiting graduate students must meet the following minimum requirement:

- Be in good standing and actively pursuing a graduate degree at another regionally accredited college or university in the U.S. or its equivalent from a foreign institution (you must upload transcripts from a college or university into your UW application).

Graduate programs may have additional admission requirements.

Application Deadlines & Procedures
- Review graduate program admissions requirements & deadlines.
- Contact the graduate program with any specific questions.
- Submit a Graduate School Application online

Registration Procedures
- Visiting graduate students register for classes in MyUW.
- Visiting graduate students must maintain continuous enrollment if they have been admitted for multiple quarters of study or lose their visiting graduate student status.
- Visiting graduate students holding an F-1 or J-1 visa must register for a minimum of 10 credits each quarter of attendance.

Additional Information
- Visiting graduate students can establish a UW NetID and a UW email account.
- Visiting graduate students have access to the UW Libraries.
- Visiting F-1 & J-1 graduate students are required to maintain insurance and are eligible for International Student Health Insurance (iSHIP).
- Visiting U.S. citizens or permanent residents should refer to the Student Affordable Care Act.

Graduate Non-matriculated
Graduate non-matriculated (GNM) status allows post baccalaureate students who are not presently seeking a graduate degree at the University of Washington to take UW graduate courses and apply the credits toward degree requirements should they later be accepted into a graduate program at the UW. (Acceptance as a GNM student does not confer priority for later admission to a graduate program at the UW.) GNM students may take any number of credits, however a maximum of 12 graduate-level credits may be applied toward degree requirements. Students may hold GNM status in only one graduate program at a time and may not hold any other student status while enrolled as a GNM student.

Citizenship and Visa Status
Students expecting to be issued F-1 student visa documents are not eligible for GNM status. Current holders of B-1 visitor visas are not eligible for GNM status.

Admission Requirements
Prospective GNM students must meet the following minimum requirements:

- Hold a baccalaureate degree from a regionally accredited college or university in the U.S. or its equivalent from a foreign institution.
- Have earned at least a 3.0 grade-point-average (on a 4 point scale) for the last 90 graded quarter credits or 60 graded semester credits.

Graduate programs may have additional admission requirements.

Application Deadlines
Deadlines are determined by the faculty of each graduate program. Applicants should contact the graduate program advisor (GPA).

Application Procedures
GNM applicants follow the same application procedures as other applicants and apply online to the Graduate School. GNM students are not required to send official transcripts to the Graduate School. To find out if the graduate program requires official transcripts, GNM students should contact the graduate program advisor (GPA).

Registration Procedures

- GNM students on the Bothell and Tacoma campuses register for classes in MyUW and must maintain continuous registration (except summer quarter) or lose their GNM status.
- GNM students participating in the UW or state employee Tuition Exemption Program register for classes in MyUW and must maintain continuous registration (except summer quarter) or lose their GNM status

Additional Information

- GNM students can establish a UW NetID and a UW email account.
- GNM students have access to the UW Libraries.
- GNM students who wish to receive financial aid should contact the UW Office of Student Financial Aid (OSFA) to find out if they are eligible for financial aid.
- GNM students are not eligible for student health insurance because it is restricted to students enrolled in degree programs.

IV. Tuition, Fees & Financial Aid

Education Cost

The cost of a student's education at the University varies with individual circumstances. The amount charged for tuition and fees is set by the state and is indexed to the cost of instruction. Since inflation increases costs generally, the tuition and fee rates also increase each year. Consequently, accurate tuition charges for future quarters cannot be provided here. Since University costs are supported by state taxes, the rates charged to students who are not residents of Washington State are higher than the rates for residents.

The Office of Student Financial Aid estimates the amount of money that students in different family situations need to meet living expenses and to pay for school. They are based on surveys of students' costs, comparisons with other schools, input from housing and transportation agencies, and they reflect cost-of-living changes. They cover modest but adequate costs for most students attending this University. The figures listed below are the costs of attending the University of Washington for one academic year (a nine-month period: autumn, winter, and spring quarters).

	Lives with Parents		Traditional	Non-Traditional	
	Undergrad	Grad	Undergrad	Undergrad	Grad
New Student Orientation*	$ 300		$ 300	$300	
Books	$900	$900	$900	$900	$900
Room & Board	$3,675	$3,675	$11,877	$15,348	$15,348
Personal	$2,265	$2,265	$2,265	$2,265	$2,265
Transportation	$1,524	$1,524	$1,524	$1,524	$1,524
TOTAL	**$8,664**	**$8,364**	**$16,866**	**$20,337**	**$20,037**

*First quarter only

Traditional: All single, undergraduate students without dependents (spouse or children) who are living away from parent's home; undergraduate married students without children whose spouses are also students.

Non-Traditional: All graduate/professional students; undergraduates who have children; married undergraduates whose spouses are not also enrolled. Registered same-sex domestic partners may request consideration for additional living costs and will need

to provide information about their partners' financial resources when they make the request.

Tuition and Fees

Figures presented here are for full-time enrollment, i.e., 10-18 credits per quarter; however, for purposes of financial aid eligibility, full-time is defined as 12 or more credits for undergraduate students and 10 credits for graduate students.

2018-2019 Tuition Rates	**Resident**	**Non-Resident**
Undergraduate	$11, 138	$36,519
Graduate Tier I	$16,521	$28,812
Graduate Tier II	$16,917	$29,406
Graduate Nursing	$16,917	$29,406
Business Masters' Programs Incoming	$24,285	$30,189
Business Masters' Programs 2nd year	$23,382	$29,340
**** Subject to change** These are just some of the tuition rates charged at the University of Washington Bothell. Please review website for more information about tuition rates. Students enrolled in Fee Based Programs should check with their program office for details about course fees or program fees.		

Tuition is due quarterly by Friday of the third week of the quarter.

Fee-based Programs

For fee-based degree programs offered through UW Bothell, the tuition rate is charged per credit at a different rate than listed in the Catalog and registration is administered through a partnership with UW Professional Continuing Education. Prospective and current students should contact the program advisor for details.

Enrollment Confirmation Deposit

All new students, and students continuing in a new classification, are required to confirm their intention to enroll by paying a nonrefundable Enrollment Confirmation deposit. The Enrollment Confirmation deposit is $100 for undergraduate students and $250 for graduate students and is not required of students admitted Summer Quarter. The fee is applied toward tuition and fees assessed for the quarter in which the student is determined to be admitted, and subsequently enrolls. Students submitting a fee for a given quarter, but who fail to register in that quarter, are not entitled to a refund.

New Student Enrollment and Orientation Fee

The NSEOF is a mandatory, one-time fee for $300 that all entering undergraduates pay to fund services received as a new student at the UW Bothell. Several transition programs are funded entirely or in part by the NSEOF including the Freshman Advising & Orientation program.

Fee Payment

An obligation to pay tuition and fees in United States dollars is incurred when a student registers. Student's official University of Washington tuition statement is online, no bills will be mailed. An email is sent to the student's email address on MyUW each quarter when the statement is ready.

The tuition due date is always the third Friday of the quarter. Payments must be received by the Bothell Cashier's Office no later than 5:00pm on the tuition due date or by 4:00pm in the drop boxes. If you do not pay your tuition by the due date, you will be assessed a late payment charge based on the amount of your outstanding balance.

For past due balances of $250 and above, the late fee is $120. For balances between $50 - $249.99, the late fee is $50. There is no late payment charge for balances under $50.

If you have not paid your outstanding balance by the end of the late payment period, a hold will be placed on your academic records. Unpaid balances will be forwarded to collections after the conclusion of the quarter.

Technology Fee

The Student Technology Fee is designed to provide funds for the improvement of technology used by students at UW Bothell. The UW Bothell Student Technology Fee Committee (STFC) determines the

expenditures of the fee. Students of UW Bothell lead the committee and the committee allocates money for technology resources for general student use, pursuant to RCW 28B.15.051 and the agreement between the Associated Students of the University of Washington Bothell (ASUWB), and the Board of Regents.

Parking and UPass
Parking at UW Bothell is $8 for all day or $5 for 3.5 hours, payable in advance at the pay stations. Quarterly parking permits for faculty/staff/students are available online at bothellcampus.thepermitstore.com. The UPass is your ticket to ride Metro, Community Transit, and Sound Transit service anytime, anywhere. The UPass for students is available through your MyUW account or at the UWB Cashier's Office after the 7th day of the quarter.

Special Course and Laboratory Fees
Some courses have extraordinary expenses associated with them, and, in such cases, the University may charge additional fees in amounts that approximate the added instructional or laboratory costs.

Late Registration
A late registration service charge of $25 is assessed to first time registration students of Period III registration and through the 10th day. First time registration students registering after the 10th day pay a $75 late registration fee.

Change of Registration Fee
A charge of $20 is made for any number of add and/or drop transactions processed during a given day beginning the second week of the quarter.

Transcript Fee
A charge of $11, payable in advance at the Bothell Cashier's Office, is required for each official transcript. Please contact the Office of the Registrar for ordering information.

Cancellation of Tuition
Registered students must pay full tuition and fees. Tuition may be canceled or reduced if a student makes an official withdrawal or drops a course during the period specified by state statute. Refunds are given when a cancellation or reduction results in an overpayment.

Fee Forfeiture
A student who does not completely withdraw, but who is dropping one or more courses, may be eligible for lower tuition, depending on the total number of credits remaining, after the course drop, and on the time period when the drop was made. Tuition for students making a course drop on or before the seventh class day is determined by the total credits remaining. Tuition for students making a course drop after the seventh class day, through the 30th calendar day of the quarter, is computed on the total credits remaining, plus one-half the difference between the old tuition and the new tuition. There is no cancellation or reduction in tuition for courses dropped after the 30th calendar day of the quarter.

Fee Refund
When a fee payment is made by check, a waiting period is required before a refund can be authorized. An application for refund may be refused, unless it is made during the quarter in which the fees apply. A student who withdraws for disciplinary reasons forfeits all rights to refund or cancellation of any portion of his or her fees.

Residence Classification Requirement
Residence classification information is available in the Office of the Registrar and online at http://www.washington.edu/students/reg/residency/.

Veterans and Children of Totally Disabled or Deceased Veterans
Information on educational benefits and special exemption programs for veterans and their dependents is available in the Veterans Services Office. Veterans and members of the armed forces who apply for admission to any campus of the University are subject to the same minimum

requirements, as are regular students, and are expected to enroll in accordance with University requirements. The University complies with the standards of progress as required by the Department of Veterans Affairs and the State Approving Agency.

Financial Obligations

The comptroller is authorized to place a hold (administrative) on the records of any student who fails to pay amounts due to the University. Until this hold is cleared, the University (1) does not release the student's record or any information based on the record, (2) does not prepare transcripts or certified statements, and (3) denies registration as well as graduation from the University. In cases of serious financial delinquency, the comptroller, with the consent of the Registrar, may order that a student's registration be canceled and that privileges of attendance be withdrawn. Tuition and fees not paid by the end of the academic quarter are subject to an interest charge of 1 percent per month or a fraction thereof (12 percent APR), beginning the month following the end of the quarter.

An administrative hold or cancellation also may occur when a student has not complied with other University rules, procedures, or obligations. The hold may be placed on the student's record by the authorized University office responsible for enforcement of the rule, procedure, or obligation involved. The student is not permitted to register for any subsequent quarter, or to obtain a transcript of his or her record, or a certified statement, except on the written release of the office that placed the hold.

Tuition Exemptions

The University of Washington Tuition Exemption Program, established under the authority of RCW 28B.15.558, enables University of Washington employees and State of Washington employees who have been admitted to the University of Washington, to have tuition waived for up to six credits each quarter provided that they register on a "space-available" basis. The Tuition Exemption Program is available at the University of Washington Seattle, Bothell, and Tacoma campuses. Those who enroll at the UW on a "space-available" basis for more than six credits will receive the tuition waiver for the first six credits and will pay a per credit charge for the credits taken over six.

Financial Aid

The UW administers many federal, state, and institutional financial aid programs to help students pay for their education. There are four basic types of aid: grants, scholarships, loans, and work study. Grants and scholarships do not have to be repaid. Loans must be repaid after graduation or withdrawal from school. The work study program gives students a chance to work part-time, either on or off campus. A Financial Aid Counselor is available on site at the UW Bothell campus to assist with a students' financial aid needs.

What is financial need?

For most aid programs, financial need is defined as the difference between what it costs to attend school and what the student can afford to pay.

Cost (Student's Budget)
- Student's Resources
Financial Need

The amount a student should be able to pay is determined by a standard, federally mandated need-analysis methodology. The methodology establishes whether a student is financially dependent on his or her parents and, if so, what the family should be able to contribute. It also takes into account the family size, number in college, total income from the prior calendar year, a percentage of net assets, and all other resources. There is no income cutoff or other simple method of determining whether a student will qualify for need-based financial aid. Any student who thinks he or she needs help should apply.

Our office will review and may recalculate your expected family contribution. If a student/parent has a change in their financial situation while in school, the student should notify the Financial Aid office to request a re-evaluation of their eligibility.

Applications and Deadlines

To receive financial aid you must meet all eligibility criteria as defined by federal, state and institutional rules. The Free Application for Federal Student Aid (FAFSA) is the basic application for financial aid. The application is available on-line at www.fafsa.ed.gov beginning October 1. The annual deadline for priority consideration is January 15 and applies to all quarters of the upcoming academic year. This date refers to the receipt date of the FAFSA whether mailed or electronically transmitted. It does not refer to the date the student mails or transmits the FAFSA. The Financial Aid office recommends that students complete the FAFSA by January 1st to ensure delivery to the federal processor by the priority deadline. You must list the University of Washington (federal code #003798, same for all three campuses) as one of the colleges to receive the results of your FAFSA. If your FAFSA is received after January 15th then you will be considered a late applicant and are only considered for limited types of aid. Students must reapply every academic year.

Students who apply for financial aid should stay in touch with the financial aid counselor, and should notify the Financial Aid office of any changes which may impact their award. The Financial Aid Office at University of Washington Bothell can be reached by phone: 425.352.5240 or e-mail uwbfaid@uw.edu.

Eligibility for Financial Aid

To qualify for aid an applicant must:

- Be a U.S. citizen, permanent resident or other eligible non-citizen
- Be admitted to the University in a degree program (correspondence and non-matriculated students are not eligible for student aid)
- Not be delinquent or in default on a previous student loan or owe a repayment on a federal grant
- Provide financial information
- Maintain satisfactory progress in a course of study http://www.uwb.edu/financialaid/satisfactory-academic-progress

Scholarships

Students enrolled, or planning to enroll, at the UW Bothell may be eligible to apply for scholarships. There are many sources of information for scholarships and other funding opportunities. Many of these resources are designed to help students identify which scholarships best match their qualifications. Each student must research the scholarships available and find those that best match their skills, experience, interests, and goals.

Visit our scholarship website, http://www.uwb.edu/financialaid/scholarships, to find out more information about researching and applying for UW Bothell and external scholarship opportunities. We encourage all currently enrolled students to apply.

V. Policies and Procedures

Registration

Full-time Requirements

You should register for 12 or more credits to be considered full-time if you are an undergraduate student. If you are a graduate student, you should register for 10 or more credits. It is important to note that differing criteria and standards for full-time enrollment exist for eligibility in certain programs. Consult the Financial Aid Office for its requirements on satisfactory student progress. To be classified as a half-time student by the University, an undergraduate must register for and complete at least 6 credits per quarter. A graduate student must register for and complete 5 credits per quarter.

Class Attendance

If you do not attend regularly scheduled class meetings during the first week of the quarter, you are subject to being dropped at the discretion of the program to allow enrollment space for other students. Do not assume that departments will automatically drop you from the course if you do not attend. If you are not going to go to class, you should drop the course on MyUW. Students who are

registered for a course but do not attend will be assigned a failing grade by the instructor. You may not attend a University course in which you have not been officially registered after the first two weeks of the quarter.

Registration Tampering
A students who tampers or attempts to tamper with the registration records of another student, including but not limited to dropping and adding courses, may be subject to disciplinary sanctions as defined in the Student Conduct Code (WAC 478-120).

Registration Abuse
Web registration is a personal service. The use of robots and other automated tools to submit registration requests is expressly forbidden.

Registration Eligibility
Newly admitted students and students readmitted to the same or a new classification (e.g., undergraduate, post-baccalaureate, graduate), or admitted to a different University campus, are eligible to register in Registration Period II after their enrollment confirmation deposit has been received.

Continuing UW Bothell students who remain in good academic standing are guaranteed the opportunity to register each quarter at the same University campus as long as they maintain continuous enrollment (excluding Summer Quarter), or fall within the guidelines of the quarter-off policy. Continuation must be in the same classification (e.g., undergraduate, post-baccalaureate, graduate) and at the same campus. After a student has earned a baccalaureate degree, he or she must apply for readmission as a post-baccalaureate, non-matriculated, or graduate student. Any student wishing to enroll at a different University of Washington campus must apply for admission to that campus.

Exceptions to the guarantee of registration eligibility include students under disciplinary action, students with a financial hold on their records, and students not meeting their departmental or University satisfactory progress policies. Additionally, continuing students who withdraw during the first week of two consecutive quarters (Summer Quarter not included) will not be eligible to register as continuing students for the third quarter and must reapply as former students returning to the University. If an undergraduate does not enroll for two or more quarters, he or she must file an application for readmission with the Office of Admissions.

Math Placement Policy
The Academic Placement Testing Program (APTP) is a cooperative program of Washington State public colleges and universities. Students who wish to register for Mathematics classes at UWB are advised to take the ***Math Placement Test***. All Math classes numbered above BMATH 121 require placement via the test OR a qualifying grade from the prerequisite college Level math class, or qualifying COMPASS test scores. Students may find the most current information about Math Placement Testing on the UWB campus webpage and any policy changes at http://www.uwb.edu/fypmp/advising/mathplacement, or by calling the First Year and Premajor Advisors at 425-352-3427.

Cross-Campus Registration
All students enrolled at one UW campus may register for courses at another UW campus on a space-available basis, starting on the first day of Registration Period II for Autumn, Winter and Spring quarters. In Summer quarter, cross-campus enrollment is allowed in Period I as well.

Freshmen must earn a minimum of 25 credits at UW campuses before cross campus registration is permitted. All other students must earn a minimum of 15 credits at UW campuses before cross campus registration is permitted. Non-matriculated students are also not allowed to enroll cross-campus. This includes non-matriculated students taking courses under the UW staff or Washington State tuition exemption. Students may not be admitted and enrolled at separate campuses simultaneously. Double degrees or majors will not be permitted to cross campus lines, and majors will be restricted to a single campus. However, students who earn a minor

at the alternate campus may have that minor recorded with the degree on the transcript at graduation.

A maximum of 45 credits earned through cross-enrollment may count toward a bachelor's degree. (Graduate students are limited to 12 credits.) This restriction is not monitored, so there is no restriction to the number of credits a student may complete by cross-enrollment; only to the number that may count toward a degree. If there are excess cross-enrollment credits, the program or school adviser should note this on the application for graduation. DARS is not programmed to know at which campus courses are completed, so a DARS audit will not point out excess cross-enrollment credits.

Note that this 45-credit limit applies only to credits taken at one UW campus while enrolled at another. A student who attends one UW campus and then is admitted to another UW campus may count toward a bachelor's degree any number of credits transferred from the first UW campus to the second (see below).

Cross-Campus Enrollment Administrative Details
The home campus is responsible for administrative and disciplinary issues. Hardship withdrawal petitions for all courses will be reviewed by the student's home campus. Student activity fees are credited to the student's home campus. Students are eligible for student activity fee-supported services only at their home campus. Only Seattle-campus students are eligible to participate in intercollegiate athletics.

Restrictions on Attending Classes
No person, other than a faculty member attending informally with the approval of the instructor, may attend a University course in which that person has not been registered.

An instructor may allow a student to attend his or her class only if the student's name is on the official class list from the Office of the Registrar. An unregistered student may attend through the fourteenth calendar day of the quarter, if the student is on an official wait list for the course.

Quarter-Off Policy
Undergraduate students who have completed a quarter at the UW Bothell may take the following quarter off, and remain eligible to register in Registration Period I for the subsequent quarter, without reapplication as a returning student. Any quarter from which a student has completely withdrawn, or from which he or she is canceled, does not constitute a completed quarter. Summer Quarter enrollment is not required to maintain continuous registration eligibility. The quarter-off policy is not available for graduate students.

Dropping a Course
Students dropping a course during the first two weeks of a quarter shall have no entry on their permanent academic transcript. If all courses are dropped, then a "withdrawn" designation is recorded on the transcript.

A course drop made during the third through the seventh weeks of the quarter is recorded on a student's transcript with a W grade and a number designating the week of the quarter in which the course drop was transacted. Only one drop is permitted from the third through the seventh week of the quarter for each academic year (Autumn through Summer quarter).

A student who does not drop a course officially through MyUW or in person at the Office of the Registrar is given a grade of 0.0.

Students receiving or applying for financial aid should check with the financial aid counselor before dropping a class because it may affect financial aid eligibility.

Dropping all courses for the quarter
It is the student's responsibility to withdraw completely if he or she is unable to attend. Students may withdraw through MyUW (through the 7th week of the quarter) or at the Office of the Registrar. An official withdrawal is effective the date of the last

drop through MyUW, the date it is received in the Office of the Registrar, or if submitted by mail, the date of the postmark.

Tuition owed will be based on the date the complete withdrawal is received. No withdrawals are accepted after the last day of instruction for the quarter. Students withdrawing on or before the seventh calendar day of the quarter do not pay tuition.

New and returning students forfeit their $100 enrollment confirmation deposit. Students who drop classes between the 8th & 30th calendar days of the quarter receive a refund of one-half of the tuition reduction associated with the drop. This is in addition to the $20 Late Change of Registration Fee.

Students who drop classes after the 30th calendar day of the quarter receive no reduction in tuition and will also be charged a $20 Late Change of Registration Fee.

The following principles apply to complete withdrawal from the University:

Courses dropped as part of a complete withdrawal from the University during the first two weeks of a quarter are not recorded on the student's UW transcript; however, the date of the complete withdrawal is recorded.

Students are required to turn in their student identification cards when they withdraw from the University and are not eligible to continue using University services or facilities after their withdrawal.

A recipient of veteran's benefits should immediately notify the Veterans Benefits Coordinator of withdrawal.

A student with a scholarship or loan awarded through the University should notify the Financial Aid Counselor of withdrawal.

Hardship Withdrawal

Hardship withdrawals may occur after the second week of the quarter. A student may file a petition with the Office of the Registrar for a hardship withdrawal, if the student is unable to complete a course because of a severe mental or physical disability, or because unusual or extenuating circumstances, beyond the student's control, prevented the student from dropping the course by the drop deadline. Hardship withdrawal forms are available in the Office of the Registrar.

Satisfactory Progress

If a student is pursuing a baccalaureate degree, he is expected to make satisfactory progress toward the attainment of that degree and is expected to enter a major and graduate after completion of a reasonable number of credits.

The 105-Credit Rule

Undergraduates must declare a major by the time they have earned 105 credits or a hold will be placed on their registration until they either declare a major, or meet with an adviser and receive a pre-major extension.

The 210-Credit rule

The University's satisfactory progress policy requires students to complete their undergraduate degree programs within 30 credits beyond the minimum required for the degree. Because most degrees require 180 credits, students generally must complete their programs by the time they earn 210 credits.

Grades

Undergraduate Grading System

UW Bothell uses a numerical grading system. Instructors may report grades from 4.0 to 0.7 in 0.1 increments and the grade 0.0. The number 0.0 is assigned for failing work or unofficial withdrawal. Grades in the range 0.6 to 0.1 may not be assigned. Grades reported in this range are converted by the Office of the Registrar to 0.0. Numerical grades may be considered equivalent to letter grades as follows:

Undergraduate Grading Scale

A	4.0 - 3.9	
A-	3.8 - 3.5	
B+	3.4 - 3.2	
B	3.1 - 2.9	
B-	2.8 - 2.5	
C+	2.4 - 2.2	
C	2.1 - 1.9	
C-	1.8 - 1.5	
D+	1.4 - 1.2	
D	1.1 - 0.9	
D-	0.8 - 0.7	Lowest passing grade.
E	0.0	Failure or unofficial withdrawal. (No credit earned)

X - No grade has been turned in

The following letter grades also may be used:

N - Indicates that the student is making satisfactory progress and a final grade will be given at the end of the quarter the work is completed. Used only for hyphenated courses (courses not completed in one quarter) and courses numbered 600, 601, 700, 750, and 800.

I - Incomplete grades may be awarded only if the student is doing satisfactory work up until the last two weeks of the quarter. Undergraduate students must not re-register for courses in which they have received an Incomplete, since a grade earned in a repeat course will not be recorded as an Incomplete conversion grade.

To obtain credit for the course, an undergraduate student must convert an Incomplete into a passing grade no later than the last day of the next quarter. An Incomplete, not made up by the end of the next quarter, will be converted to the grade of 0.0 by the Registrar, unless the instructor has indicated, when assigning the Incomplete grade, that a grade other than 0.0 should be recorded, if the incomplete work is not completed. The original Incomplete grade is not removed from the transcript. An instructor may approve an extension of the Incomplete removal deadline by writing to the Office of the Registrar, no later than the last day of the quarter, following the quarter in which the Incomplete grade was assigned. Extensions, which may be granted for up to three additional quarters, must be received before the Incomplete has been converted into a failing grade.

In no case can an Incomplete, received by an undergraduate, be converted to a passing grade after a lapse of one year.

S - Satisfactory grade for courses taken on a satisfactory/not-satisfactory basis. An S grade is automatically converted from a numerical grade of 2.0 or above for undergraduates. The grade S may not be assigned directly by the instructor, but is a grade conversion by the Office of the Registrar. S/NS graded courses may not be used to satisfy major or general education requirements. S is not computed in GPA calculations.

NS - Not-satisfactory grade for courses taken on a satisfactory/not-satisfactory basis. A grade less than 2.0 for undergraduates is converted to NS. NS is not included in GPA calculations. No credit is awarded for courses in which an NS grade is received.

CR - Credit awarded in a course offered on a credit/no credit basis only, or in courses numbered 600, 601, 700, 750, and 800. The minimum performance level required for a CR grade is determined, and the grade is awarded directly, by the instructor. CR is not computed in GPA calculations.

NC - Credit not awarded in a course offered on a credit/no-credit basis only, or in courses numbered 600, 601, 700, 750, and 800. The grade is awarded directly by the instructor and is not included in GPA calculations.

W - Official withdrawal or drop from a course from the third through the seventh week of the quarter for undergraduates. A number designating the week of the quarter is recorded with the W, when a course is dropped. It is not computed in GPA calculations.

HW - Grade assigned when an undergraduate is allowed a hardship withdrawal from a course after the fourteenth calendar day of the quarter. It is not computed in GPA calculations.

X - An instructor may submit a grade of "X" for a student if, for whatever reason, the student's grade is not available when the grades for the class are submitted. The X grade is also recommended for pending student conduct cases. The student does not receive credit for the course until a numerical grade is turned in. Also, if an instructor has not turned in any grade by the time grade reports are printed, an "X" will be recorded until the grade is submitted. If the instructor never turns in a grade, the X remains on the transcript. The GPA is not affected and no credit is granted.

Nontraditional Grading Options:

Credit/No Credit-Only as a Course Option
With appropriate departmental review and approval, a course may be offered on a credit/no credit-only basis. The standard for granting credit in credit/no credit-only courses, under this option, is the demonstration of competence in the material of the course to the instructor's satisfaction.

Satisfactory/Non-Satisfactory Grading Option
An undergraduate may earn up to 25 elective credits, of the 180 minimum credits required for graduation, on a satisfactory/non-satisfactory (S/NS) basis. S/NS graded courses may not be used to satisfy major or general education requirements. Each instructor shall report numeric grades to the Registrar, who shall convert satisfactory grades (2.0 or greater) to S, and non-satisfactory grades (less than 2.0) to NS for the student's transcript. S/NS shall not be considered in computation of the grade-point average.

The student may indicate at the time of registration if she or he elects to take a course on an S/NS basis. The student can change to and from an S/NS option, through the seventh week of the quarter, through electronic registration. There is no limit to the number of S/NS credits that a student can register for in a given quarter. Withdrawal from an S/NS course is subject to the same regulations as for any other course.

Grade-point average
The cumulative grade-point average is based solely on courses taken in residence at the University of Washington.

Computation of grade-point average
The grade-point average for graduation is computed by dividing the total cumulative grade points by the total credits attempted for courses taken in residence at the University. Grade points are calculated by multiplying the number of credits by the numeric value of the grade for each course. The sum of the grade points is then divided by the total credits attempted. Courses elected on an S/NS basis are counted as follows: Satisfactory grades are printed on the permanent record as an S and do not count in the quarterly or cumulative grade-point average, but they do count as credits earned toward graduation. Not-satisfactory grades, NS, do not count in the quarterly and cumulative grade-point averages and do not count as credits earned toward graduation.

Example 1:

Course	Credits	Grade	Grade Points
BIS 498	3	0.0	0.0
BIS 300	5	2.9	14.5
BIS 343	5	3.2	16.0
			30.5

Total credits earned toward graduation is 10
Total graded credits attempted is 13
Grade-point average: 30.5 / 13 = 2.35
The total graded credits attempted, not the credits earned toward graduation, are used in computing the grade-point average.

Example 2:

Course	Credits	Grade	Grade Points
BIS 325	5	2.3	11.5
BIS 463	5	2.9	14.5
BIS 313	5	I	0.0
			26.0

Total credits earned toward graduation is 10
Total graded credits attempted is 15
Grade-point average: 26.0 / 10 = 2.60

The student attempted 15 credits, but only 10 are graded, because the I is not computed in the grade-point average. If the work in BIS 313 is not made up by the end of the quarter, the "I" will convert to a numeric grade of 0.0, and the grade-point average will be recomputed. When the grade of 0.0 is received, it is computed in the grade-point average, but no credit is awarded toward graduation.

Repeating Courses
With the approval of the academic department offering the course, an undergraduate may repeat a course once. Both the original grade and the second grade are computed in the GPA but credit is allowed only once. Veterans receiving benefits must receive approval from the Office of Special Services before a course is repeated.

Courses considered to have been taken once include any with a numerical grade or those with grades of I, CR/NC, or S/NS. Withdrawn or dropped courses and courses with X or no grade reported will not count as the first taking of a course. If you are currently enrolled in a course, registration for the same course in the following quarter will be counted as a repeat registration.

Departments may restrict undergraduates from repeat registration into courses. Restrictions may include:

- Only allowing registration after Period I
- Only allowing registration after the quarter has begun, or
- Requiring an Entry Code for a repeat registration

A second repeat (taking a class for a third time [or more]) cannot be done using MyUW. A second repeat requires the department to register you into the course. Grades in the third or subsequent takings will not be included in the grade-point average (GPA).

Grading Procedures
Change of Grade: Except in case of error, no instructor may change a grade that he or she has turned in to the Registrar. A student who finds administrative omissions or errors in a grade report must make application to the Registrar for a review, not later that the last day of the student's next quarter in residence, but in no case after a lapse of two years. Grades used to meet graduation requirements cannot be changed after the degree has been granted. Time spent in military service is not counted as part of the two-year limitation. Students are not automatically notified of grade changes posted after the first of the quarter.

Grade Appeal Procedure
A student who believes he or she has been improperly graded first discusses the matter with the instructor. If the student is not satisfied with the instructor's explanation, the student may submit a written appeal to the dean or director of the student's academic program (or their designee) with a copy of the appeal also to the instructor. The dean or director consults with the instructor to ensure that the evaluation of the student's performance has not been arbitrary or capricious. Should the director believe the instructor's conduct to be arbitrary or capricious, and the instructor declines to revise the grade, the dean or director, with the approval of the voting members of his or her faculty, shall appoint an appropriate member, or members, of the faculty of that department, to evaluate the performance of the student and assign a grade. The Vice Chancellor of Academic Affairs should be informed of this action.

Once a student submits a written appeal, this document, and all subsequent actions on this appeal are recorded in written form for deposit in a department or college file.

Grade Reports
Grades are available through MyUW at the end of each quarter.

University Policy on Student Education Records
A copy of the University's policy on a student's right to inspect his or her education records and the University's responsibility to maintain the confidentiality of such records are available at reference stations on campus (e.g., Office of the Chancellor and the Library).

Scholarship - Undergraduate Level

Academic Standards

Students are expected to meet the traditional standards of honesty and truthfulness in all aspects of their academic work at UW Bothell. In particular, all work submitted to an instructor in fulfillment of course assignments, including papers and projects, written and oral examinations, and oral presentations and reports, must be free of plagiarism. Plagiarism is using the creations, ideas, or words of someone else without formally acknowledging the author or source, through appropriate use of quotation marks, references, and the like. Student work in which plagiarism occurs will not ordinarily be accepted as satisfactory by the instructor and may lead to disciplinary action against the student submitting it. Any student who is uncertain whether his or her use of the work of others constitutes plagiarism should consult the course instructor for guidance before formally submitting the course work involved.

Low Scholarship

Academic Warning

An undergraduate student whose grade-point average falls below 2.00 in his or her first quarter at the University, receives an academic warning. If a cumulative grade-point average of at least 2.00, for courses earned in residence at the University, is not achieved by the end of the next quarter, he or she is placed on academic probation.

Probation and Dismissal for Low Scholarship

An undergraduate student is placed on academic probation at the end of any quarter (except for the first quarter at the University, when an academic warning is issued), in which his or her cumulative grade-point average falls below 2.00. Once on probation, the student must attain at least a 2.50 for each succeeding quarter's work, until the cumulative grade-point average is raised to a 2.00, or the student is dropped for low scholarship.

Reinstatement

A student who has been dropped under low scholarship rules will be readmitted to the University upon review of a reinstatement petition submitted to their program office. A student readmitted, after being dropped under these rules, reenters on academic probation. The student's grade-point average is the same as when dropped from the University, and the student may not use grades from other colleges or universities to raise his or her UW grade-point average. A readmitted student is dropped if he or she fails to attain either a 2.50 grade-point average for the following quarter's work, or a cumulative UW grade-point average of 2.00 at the end of that quarter. The student is removed from probation at the end of the quarter in which a cumulative grade-point average of 2.00 or better is reached.

Senior in Final Quarter

A senior who has completed the required number of credits for graduation, but whose work in what would normally be his or her final quarter places him or her on probation, does not receive a degree until removed from probation.

High Scholarship

Quarterly High-Scholarship List

The quarterly high-scholarship list includes the names of matriculated undergraduate students who have attained a quarterly grade-point average of 3.50 in the final grades for at least 12 graded credits. Appropriate high-scholarship entries are made on the student's permanent academic record.

Yearly Undergraduate Honors

The yearly award for high scholarship is received on the academic transcript of students who have achieved the following:

A cumulative grade-point average of 3.50 in at least three quarters of the academic year (Summer, Autumn, Winter, Spring)
12 graded credits or more for each of the three quarters, exclusive of Satisfactory/Not Satisfactory (S/ NS) and Credit/No Credit-only (C/NC) courses.

Students who have attended the UW four quarters of the school year (Summer through Spring) must have a grade-point average of 3.50 for each of any three

quarters, a minimum of 12 graded credits (exclusive of S/NS and C/NC courses) for each of the three quarters, and a cumulative GPA of 3.50 for the four quarters.

Graduate Grading System

In reporting grades for graduate students, units that offer graduate degrees use the system described herein. Grades are entered as numbers, the possible values beginning at 4.0 and decreasing by one-tenth increments until 1.7 is reached. Grades below 1.7 are recorded as 0.0 by the Registrar and do not count toward residency, total credit count, or grade and credit requirements. A minimum grade of 2.7 is required in each course that is counted toward a graduate degree. A minimum GPA of 3.00 is required for graduation.

Correspondence between number grades and letter grades is as follows:

Graduate Grading Scale

A	4.0 - 3.9
A-	3.8 - 3.5
B+	3.4 - 3.1
B	3.0
B-	2.9 - 2.5
C+	2.4 - 2.1
C	2.0
C-	1.9 - 1.7
E	1.6 - 0.0

The following letter grades also may be used:

I - Incomplete. An incomplete may be given only when the student has been in attendance, has done satisfactory work to within two weeks of the end of the quarter, and has furnished proof satisfactory to the instructor that the work cannot be completed, because of illness or other circumstances beyond the student's control. A written statement giving the reason for the incomplete, and indicating the work required to remove it, must be filed by the instructor, with the head of the unit in which the course is offered.

To obtain credit for the course, a student must successfully complete the work by the last day of the next quarter in residence. This rule may be waived by the dean of the college in which the course is offered. In no case may an incomplete be converted into a passing grade after a lapse of two years or more. An incomplete received by a graduate student does not automatically convert to a grade of 0.0, but will remain a permanent part of the student's record.

N - No grade. Used only for hyphenated courses and courses numbered 600 (Independent Study or Research), 601 (Internship), 700 (Master's Thesis), 750 (Internship), or 800 (Doctoral Dissertation). An N grade indicates that satisfactory progress is being made, but evaluation depends on completion of the research, thesis, internship, or dissertation, at which time the instructor or supervisory committee chair should change the N grade(s) to one reflecting the final evaluation.

S/NS - Satisfactory/Not Satisfactory. A graduate student, with the approval of the graduate program coordinator or supervisory committee chair, may elect to be graded S/NS in any numerically graded course for which he or she is eligible. The choice must be indicated at the time of registration or by the tenth day of the quarter. (As with all registration changes, a $20 change fee will be charged beginning the second week of the quarter.) Only in very unusual cases may S/NS grades be converted to numeric grades or vice versa. The instructor submits a numeric grade to the Registrar's Office for conversion to S (numeric grades of 2.7 and above) or NS (grades lower than 2.7).

CR/NC - Credit/No Credit. With the approval of the faculty in the academic unit, any course may be designated for grading on the credit/no-credit basis by notice in the appropriate Time Schedule. For such courses, the instructor submits a grade of CR or NC to be recorded by the Registrar's Office for each student in the course at the end of the quarter. All courses numbered 600, 601, 700, 750, and 800 may be graded with a decimal grade, CR/NC, or N at the instructor's option.

W - Withdrawal. Official withdrawal from a course may be done on MyUW through the second week of

the quarter. During the first two weeks of the quarter no entry is made on the permanent academic record. The third week through the seventh week of the quarter, a W, and week designation, is recorded on the transcript. Refer to the Time Schedule after the seventh week of the quarter.

HW - Hardship Withdrawal. Grade assigned when a graduate student is allowed a hardship withdrawal from a course after the second week of the quarter.

Unofficial withdrawal from a course shall result in a grade of 0.0.

The grades of W and HW count neither as completed credits nor in computation of the GPA.

Of the minimum number of credits required for a graduate degree, a graduate student must show numerical grades in at least 18 quarter hours of course work taken at the UW. These numerical grades may be earned in approved 400-level and 500-level courses.

The student may petition the Dean of the Graduate School to modify the procedures described above. The petition should be accompanied by comments and recommendations from the graduate program coordinator or supervisory committee chairperson.

Repeating Courses

Graduate students may repeat any course. Both the first and second grades will be included in the cumulative GPA. Subsequent grades will not be included, but will appear on the permanent record. The number of credits earned in the course will apply toward degree requirements only once.

Continuation or Termination of Students in the Graduate School

Admission to the Graduate School allows students to continue graduate study and research at the University of Washington only as long as they maintain satisfactory performance and progress toward completion of their graduate degree program. The definition of satisfactory performance and progress toward completion of the degree program may differ among degree offering units; therefore, **it is imperative that each graduate unit have these requirements in writing and distribute them to each graduate student.** The following information should be included:

- General expectations for graduate student performance within the academic unit, including, but not limited to, required coursework and length of time allowed for completion of various phases of the program.

- The identification of persons in departments, colleges, schools, and groups who are responsible for both the evaluation of graduate student progress and for informing students about the fulfillment of these requirements, and when such evaluations are to be made.
- Criteria by which performance and progress are to be evaluated, including areas which may or may not be negotiated.

- Under what circumstances the graduate unit will recommend to the Dean of the Graduate School the alteration of a student's standing--i.e., conditions that warrant probation and final probation (see Recommended Guidelines), and length of time the academic unit will tolerate unsatisfactory performance and progress.

- Procedures for appealing evaluations recommended to the Graduate School by the graduate program.

Scholarship -Graduate Level

A cumulative GPA of 3.00 or above is required to receive a degree from the Graduate School. A graduate student's GPA is calculated entirely on the basis of numeric grades in 400- and 500-level courses. The grades of S, NS, CR, NC, and N are excluded, as are all grades in courses numbered 600, 601, 700, 750, and 800, and in courses at the 100, 200, and 300 levels.

Failure to maintain a 3.00 GPA, either cumulative or for a given quarter, constitutes low scholarship and may lead to a change-in-status action by the Graduate School. Failure to maintain satisfactory performance and progress toward a degree may also result in a change-in-status action by the Graduate School.

Review Process

Review of students who maintain a 3.0 grade point average (GPA) is at the discretion of the graduate program but is expected to be undertaken at least annually. Students whose cumulative or quarterly GPA falls below a 3.0 must be reviewed quarterly and be provided with a written explanation of performance expectations and a timetable for correction of deficiencies. Doctoral program students are to be reviewed by their doctoral Supervisory Committee, or by a committee of graduate faculty in the unit appointed or elected for this purpose in consultation with the student's Supervisory Committee. Pre-doctoral or master's students are to be reviewed by supervisory committees, if such committees have been appointed, or by the graduate faculty members who have been designated to oversee such students' programs.

In evaluating the student's performance and progress, all of the following should be reviewed:

- Performance in the fulfillment of degree program requirements.
- Maintenance of a minimum GPA of 3.0 cumulatively and for every quarter of coursework. Cumulative and quarterly GPA's are computed on courses taken while the student is enrolled in the UW Graduate School. Computation is based only on courses numbered 400-599; courses graded I, S/NS, and CR/NC are excluded, as are the 600-800 series.
- Performance during informal coursework and seminars.
- Research capability, progress, and performance.

A determination of satisfactory performance and progress may be made upon review of the factors indicated above and consideration of the student's progress relative to other students (part-time/full-time) in the program or to an individually negotiated schedule. Full or partial withdrawal from a quarter may be considered as failure to maintain satisfactory progress and a student may be dropped as a result if he or she was on final probation for the previous quarter.

When review of a student's performance and progress result in a determination that it has been unsatisfactory, the name of the student and recommendation for action--i.e. probation, final probation, or drop--must be transmitted by the Graduate Program Coordinator or the head of the graduate program to the Dean of the Graduate School by the appropriate deadline dates. All recommendations of unsatisfactory performance and progress must be accompanied by a well-documented statement of the circumstances involved and evidence that the action requested is supported by the majority of the graduate faculty, delegated representatives, or supervisory committee involved. Students must receive written notification of this action which includes information regarding the necessary steps the student must take to maintain good standing in their graduate student status.

Deadlines

Drop recommendations must be sent to the Graduate School by the fifth day of class; probation and final probation recommendations must be sent to the Graduate School by the tenth day of class. Students who are on official leave or are not

registered cannot be recommended for probation, final probation, or drop.

Recommended Guidelines

Below are guidelines to determine recommended action for unsatisfactory performance and progress. Recommendations for probation, final probation, and drop will be reviewed by the Dean of the Graduate School. Probation and final probation recommendations are noted on a student's unofficial transcript. In addition to notification from their graduate program, students will receive final probation and drop status letters from the Dean of the Graduate School.

Recommendations do not persist and must be reported to the Graduate School every quarter. No action will appear on the transcript for any subsequent quarter unless a new recommendation is made to the Dean of the Graduate School.

No Action

Recommended for those students whose cumulative GPA is above 3.0 but whose most recent quarter's work is below 3.0, if the review has determined that this condition is not cause for immediate concern.

Warn

This status is initiated and documented by the graduate program, but is not reported to the Graduate School and does not appear on the student's transcript. The graduate program is expected to notify each student in writing and place any documentation in the student's file.

Recommended for students whose cumulative GPA has dropped slightly below 3.0--i.e. 2.99-2.95.

Recommended for students who have failed to meet expectations for performance and progress as determined by the graduate program.

Probation

A graduate program may recommend numerous quarters of probation for a student, but the Graduate School recommends no more than three consecutive quarters (each quarter must be recommended separately). All students must be informed of the graduate program's policy regarding the length of probationary periods.

Recommended for students who have not corrected the deficiency which caused the warn action within the time limit specified by the graduate program.

Recommended for students who depart suddenly and substantially from scholarly achievement as defined by the graduate program. (A previous warn recommendation is not necessary.)

Final Probation

After at least one quarter of probation, a graduate program may recommend final probation. Final probation may only be recommended for one quarter, though the Graduate School will consider one additional quarter in extenuating circumstances. A graduate program must recommend one quarter of final probation before recommending a student be dropped from the program. Exceptions to this policy will be considered by the Graduate School in extenuating circumstances.

Recommended for students who have not corrected the condition(s) that caused the probation recommendation within the time limit specified by the graduate program.

Recommended for students who may have corrected previous probation conditions but failed additional performance requirements and did not progress toward completion of the graduate program.

Drop

A graduate program may recommend a student be dropped from their program after one quarter of final probation. Exceptions to this policy will be considered by the Graduate School only in extenuating circumstances. If the Graduate School accepts a drop recommendation, the Registrar is notified by the Graduate School and the student is immediately removed from the graduate program.

This is the final action to be recommended for students who have not corrected the condition(s) that caused the final probation recommendation within the time limit specified by the graduate program.

Appeals
Students may appeal these recommendations directly to the Chair or Director of the graduate program. Appeals beyond this point must follow the process outlined in Graduate School Memorandum No. 33, Academic Grievance Procedure.

Graduation Requirements

Graduation - Baccalaureate Level

Filing an application
A UW Bothell student must make an appointment with the program office to complete a written application for graduation. The student should file three quarters before the expected date of graduation. The absolute deadline for filing an application is Friday of the third week of the quarter in which the student intends to graduate.

Because degrees are not automatically awarded when requirements have been satisfied, it is the student's responsibility to apply for a degree. The student's application and any supporting documents are processed upon completion of the appointment with the program office.

The application will be signed by the student, program advisor, and UW Bothell Registrar's Office. If a problem arises, the UW Bothell Registrar's Office, or the program office, will notify the student. Program advisors should notify the UW Bothell Registrar's Office if a course listed on the graduation application is substituted. If an applicant is ineligible to graduate because of a deficiency, the UW Bothell Registrar's Office will notify the student.

Graduating Senior Priority
Graduating seniors or post-baccalaureate students, may qualify for early registration for the upcoming quarter(s). To qualify, the student must file a graduation application no later than the third Friday of the quarter before they plan to graduate.

Students who qualify will receive Graduating Senior Priority status for no more than two quarters prior to graduation. If graduation is postponed, the student may postpone their priority quarter. When Graduating Senior Priority has been used for two quarters, the student will revert to regular senior priority.

Requirements for a Baccalaureate Degree
To graduate, a student must meet University requirements; college, school, or campus requirements; and department or program requirements. This section contains only University requirements. The graduation requirements for particular programs at the UW Bothell campus are explained in the catalog sections devoted to the academic programs.

Scholastic Standards Required
To be eligible for the baccalaureate degree, a student must earn a cumulative grade-point average of at least 2.00 for all work done in residence at the University. The graduation grade-point average is computed when the student has completed all work for the degree and includes only credits earned while in residence at the University.

Credits Required
To be eligible for graduation from the University, with the baccalaureate degree, a student must offer a minimum of 180 academic credits and satisfy all other specific requirements. The University of Washington Bothell has established minimum general education requirements for baccalaureate degrees. These minimum requirements are:

English Composition - 5 credits (A grade of 2.0 is required)
Additional Writing - 10 credits QSR - 5 credits
NW - 15 credits
VLPA - 15 credits
I & S - 15 credits
Diversity- 3 credits (can overlap with general education requirements above)*
*Diversity Requirement- courses which focus on the sociocultural, political, and economic diversity of human experience and help students develop an

understanding of the complexities of living in increasingly diverse and interconnected societies.

Each University of Washington Bothell program has established requirements that meet or exceed these minimum requirements.

Limitation on ROTC Credits
Credits earned in first- and second-year military training courses cannot be counted in the basic 180 credits required for graduation.

Limitations on Physical Education Activity Credits
No more than three physical education activity credits can apply toward a degree.

Final-year Residence Requirement
To be recommended for a first, or subsequent, baccalaureate degree, a student must complete 45 of his or her final 60 credits as a matriculated student in residence at the campus of the University where the degree is being earned. The granting of exceptions to this rule is the responsibility of the dean of the school, college, or campus awarding the degree. If an exception is granted, the student still must present a minimum of 45 credits taken in residence as a matriculated student to be awarded a UW degree.

Catalog for Graduation Requirements
In general, a student graduates under the requirements of the current catalog. However, a student may fulfill graduation requirements noted in the catalog in effect at the time he or she entered the school or college from which he or she is to graduate, provided that (1) not more than ten years have elapsed since the student's entry, and (2) the school, college or campus, and department or program agree that the student may graduate under the earlier requirements.

If the student graduates more than 10 years after enrolling in the school, college, or campus, the current catalog must be used for graduation purposes. Exceptions to this rule cannot be made without official University and Bothell campus approval.

Waiver of Graduation Requirements
A request for waiver of Bothell campus or University graduation requirements must be petitioned to the UW Bothell Registrar, who represents the General Faculty Organization at the University of Washington Bothell. Petition forms are available in the program office and should be filed with the application for the degree or as soon as possible after the need arises. A student should see his or her academic advisor to initiate a petition.

An exemption from an all-University graduation requirement, that is granted by the Registrar, becomes void at the end of two calendar years from the date such exemption is granted, if all degree requirements have not been completed within that period.

Two Majors or Two Degrees
Second Baccalaureate Degree
A second baccalaureate degree may be granted, but a student must earn a minimum of 45 credits beyond the number required for the first degree. These credits usually must be earned in residence, with the granting of exceptions to the residency rule being the responsibility of the college, school, or campus awarding the degree. The student must achieve no less than a 2.00 cumulative grade-point average in the credits required for the second degree.

Degrees with Two Majors
The student's application for a baccalaureate degree, with two majors at the University of Washington Bothell, must show both majors and be approved by the academic advisors of both departments or programs. Both majors appear on the student's transcript.

Two Baccalaureate Degrees Concurrently
Two baccalaureate degrees, associated with different majors at the University of Washington Bothell, may be granted at the same time. The total number of academic credits earned must reach a minimum of 45 credits in excess of the number required for the first baccalaureate degree.

Graduation with Honors
Baccalaureate honors are awarded upon graduation to undergraduates earning their first bachelor's degree with at least 90 UW credits, of which at least 60 are numerically graded. Correspondence credits do not count as "UW credits.

These honors have nothing to do with whether the students are in either the departmental or college honors program. In addition, students who have earned quarterly and/or annual Dean's List recognition do not necessarily qualify for baccalaureate honors.

All graduates earning baccalaureate honors are given a gold honor cord to wear in the Commencement ceremony. For students graduating in spring, the honors listed in the commencement program, as well as honor cord distribution, are based upon a student's cumulative GPA as of the winter quarter, since spring grades are not available for this determination. Spring classes are ultimately included in the credit totals and GPA calculations for honors posted to the student's final record.

The GPA's for baccalaureate honors are set each year for the following year (autumn through summer) by a subcommittee of the Faculty Council on Academic Standards, based on statistics for the current year provided by the Graduation and Academic Records Office. The GPA cutoffs have been different for each of the degree programs.

Faculty honor is awarded upon graduation to undergraduates earning their first bachelor's degree and ranked in the top 10% of their respective program. Undergraduates must earn a minimum of 70 graded credits at UW Bothell with the exception of BSN students, who must earn a minimum of 43 graded credits. Undergraduates qualified for baccalaureate honors are not eligible to receive faculty honors.

The GPAs for faculty honors are determined each year for the following year (autumn through summer) by the UW Bothell Registrar's Office, based on statistics for the current year. The GPA cutoffs may be different for each of the degree programs.

All graduates earning faculty honors are given a purple honor cord to wear in the Commencement ceremony and the honor is listed in the commencement program. Honor cord distribution is based upon a student's cumulative GPA as of the winter quarter, since spring and summer quarter grades are not available for this determination. However, spring and summer courses are ultimately included in the credit totals and GPA calculations for honors and posted to the student's final record.

Commencement
Formal commencement exercises are conducted at the close of Spring Quarter. During March of each year, commencement information is sent to each student entitled to participate the following June (i.e., those who graduate the previous December or March and those who anticipate graduating in the current June and August).

Diploma Distribution
Diplomas are available 8-10 weeks after the end of the quarter in which they are earned.

Graduation - Graduate Level
Requirements for a Graduate Degree

- A student must satisfy the requirements for the degree that are in force at the time the degree is to be awarded
- At least 36 credits must be completed
- All courses numbered 400-799 that are numerically graded 2.7 and above, or have a grade of Satisfactory or Credit ('S' or 'CR') count toward the 36 credit total. 499 courses are not counted in the 36 credit total.
- Courses graded less than 2.7 do not count towards the 36 credit total.
- At least 18 credits must be in courses numbered 500 and above.
- 18 credits must be numerically graded in department approved 400-level courses

accepted as part of the major and in 500-level courses. This excludes 499 and transfer credits.

- No more than 6 graduate level quarter credits can be transferred from other academic institutions to count toward the 36 credit total.
- No more than 12 UW Graduate Non-matriculated credits can be applied to the 36 credit total.
- No more than 12 credits derived from any combination of UW Graduate Non-matriculated credits and transfer credits can be applied to the 36 credit total.
- If a student repeats a non-repeatable class, only one set of credits counts toward the 36 credit total.
- A minimum cumulative GPA (grade point average) of 3.00 is required for a graduate degree at the University
- The Master's Degree Request must be filed
- If the Master's Degree Request is filed during weeks ten and eleven it is not accepted. The system is closed.
- In summer quarter, the Master's Degree Request is filed in weeks eight and nine is not accepted. The system is closed.
- Must complete all degree requirements within six years
- The timeframe/clock begins on the first day of the quarter that the Graduate Student uses a course to satisfy degree requirements when he/she is coded as either a Graduate Non-Matriculated student (Department Code with class 6) or as a Graduate Student (Department code with class 8) in the department to which he/she is admitted.
- UW Graduate Non-matriculated credits used towards the 36 course credit total are counted in the six years.
- Quarters spent On-Leave and out of status are counted in the six years.
- Must maintain registration through the end of the quarter in which the degree is conferred or, if eligible, pay the Graduate Registration Waiver Fee within 14 days following the last day of the quarter in which all degree requirements were met.
- Thesis track students are required to take a minimum of 9 thesis credits in their 36 credit total.
- Thesis Track students are required to submit two copies of an acceptably formatted thesis to the Graduate School by 5 pm on the last day of the quarter.

Graduate Study Policies

The following sections contain detailed information concerning policies and procedures relating to graduate students and graduate studies. See also the sections on Admission, Graduation, and Scholarship for other policies relating to graduate students. Students are advised to verify all information with the graduate program coordinator or appropriate staff.

Graduate Program Coordinator

The graduate student's initial work at the University is guided by the graduate program coordinator in his or her field. The coordinator must be a senior tenured member of the graduate faculty and is the official representative of the academic unit that offers the graduate degree program. The graduate program coordinator maintains familiarity with policies and procedures of the Graduate School and provides overall coordination of graduate activities within the unit.

Graduate Courses

Graduate courses are intended for, and ordinarily restricted to, either students enrolled in the Graduate School or graduate non-matriculated students, and are given numbers from 500 to 800. Some courses at the 300 and 400 levels are open to both graduates and upper-division undergraduates. Such courses, when acceptable to the supervisory committee and the Graduate School, may be part of the graduate program. The Graduate School accepts credit in approved 300-level courses for the minor or supporting fields only. Courses at the 300 level are not included in the calculation of grade-point average (GPA) and will not apply toward the minimum Graduate School requirement of 18 graded credits for the master's or doctoral degree. Approved 400-level courses are accepted as part of the major as well as minor or supporting fields. Courses numbered 498, and entitled Special Topics and Special Projects, normally are not applicable to a graduate degree program if addressed primarily to introductory content and undergraduate students. Undergraduate research (499) is not accepted as part of the graduate program. Graduate School Memorandum No. 36 offers additional information on graduate courses. With the exception of Summer, students are limited to a maximum ten credits per quarter of any combination of courses numbered 600, 700, or 800.

Residence

The residence requirement for a master's degree is one year (three full quarters). Students registered for fewer than ten credits per quarter may add part-time quarters together to achieve the equivalent of one full-time quarter (ten or more credits) to be applied toward fulfilling residence requirements. However, excess credits beyond ten may not be subtracted from one quarter and added to another. Once a student is admitted to a graduate degree program, a full quarter of residence is granted for any quarter in which at least ten credits in graduate course, research, thesis, internship, or dissertation work are satisfactorily completed.

Only courses numbered 400, 500, 600, 700, and 800 can be applied to residence or course credit in the major field for advanced degrees (please see Graduate Courses earlier in this section regarding courses numbered 498 and 499). Courses numbered 300 are not applicable to residence or course credit toward advanced degrees, except when applied by permission of the graduate program coordinator or supervisory committee toward the graduate minor or supporting courses. Courses numbered below 300 are not applicable to residence or course credit for advanced degrees.

Enrollment Status

Final Quarter Registration

A student must maintain registration as a full- or part-time graduate student at the University for the quarter in which the master's degree is conferred. A student who does not complete all degree requirements by the last day of the quarter must be registered for the following quarter.

Continuous Enrollment and Official On-leave Requirement

To maintain graduate status, a student must be enrolled at least on a part-time or on-leave basis from the time of first enrollment in the Graduate School until completion of all requirements for the graduate degree. This includes applying for the master's degree, the passing of the master's final examination, or final examinations, the filing of the thesis or dissertation, and the receiving of the degree. Summer Quarter on-leave enrollment is automatic for all graduate students who were either registered or on-leave the prior Spring Quarter. Failure to maintain continuous enrollment constitutes evidence that the student has resigned from the Graduate School.

A student's petition for on-leave status must be approved by the department graduate program coordinator or alternate no later than the fifth day of the quarter. To be eligible for on-leave status, the student must have registered for and completed at least one quarter in the UW Graduate School and have been registered or on-leave for the immediate previous quarter (excepting Summer). An on-leave student is entitled to use the University Libraries and to sit for foreign language competence examinations, but is not entitled to any other University privileges

of a regularly enrolled and registered full- or part-time student. The student pays a nonrefundable fee to obtain on-leave student status and can only go on leave for one quarter at a time. Please note: Periods spent on-leave are included as part of the maximum time periods allowed for completion of a graduate degree.

Readmission
A student previously registered in the Graduate School who has failed to maintain graduate student status, but who wishes to resume studies, must file an application online by the published closing dates, for admission to the Graduate School. If the student is readmitted, registration will occur during the registration period II. If the student has attended any other institution during the period when not registered at the University of Washington, official transcripts of the student's work (in duplicate) must be submitted. An application for readmission carries no preference and is treated in the same manner as an application for initial admission. Payment of the application fee is also required.

Community Standards and Student Conduct

University of Washington Bothell students are expected to maintain the highest standards of academic integrity and behavioral conduct. These standards, which are detailed in the Student Conduct Code for the University of Washington (WAC 478-121) safeguard university functions, and protect the rights and freedoms of all members of the academic community.

Academic Integrity
Most UW Bothell students are honest and conduct themselves with integrity; they are disturbed when they observe others cheating.

Cheating harms the University community in many ways. The unfairness of undetected and unpunished cheating frustrates honest students. Cheaters may skew a grading curve on an assignment or in a class, lowering grades of students who do their own work. Students who cheat deny themselves a real education. They cheat themselves of general knowledge. More importantly, they pass up the experience of learning how to learn, the very thing that makes a degree so valuable to employers. As a result, the reputation of the University and the value of a UW Bothell degree diminish if employers find graduates lacking the abilities their degrees should guarantee.

Finally, most professions have a code of ethics, standards to which you will be expected to adhere to when working. At the University, you practice the integrity you must demonstrate later. For all these reasons, academic dishonesty is a serious offense at the UW Bothell; the University community is committed to reporting suspected occurrences of academic misconduct.

Academic Misconduct
Academic misconduct includes but is not limited to the following in connection with any exam, research, course assignment, or other academic exercise that contributes to the satisfaction of requirements for courses or graduation. Academic misconduct includes but is not limited to:

Cheating
- Giving or receiving unauthorized assistance, or using unauthorized materials or information.
- Copying from another student.
- Using unauthorized resources, study aides or other people's work.
- Altering assignments or exams and submitting them as original work.
- Offering false excuses to gain an advantage through additional time or some other advantage on class assignments.
- Submitting someone else's work as your own.
- Getting someone to take an exam for you or taking an exam for someone else.
- Receiving unauthorized help on an exam or prohibited help on an assignment.

- The acquisition, use, or dissemination of a test or other academic material without permission.
- Engaging in behavior specifically prohibited by an instructor as outlined in the course syllabus or stated in class discussions.

Unauthorized Collaboration
Educators recognize the value of collaborative learning; students are often encouraged to form study groups and assigned group projects. Group study often results in accelerated learning, but only when each student takes responsibility for individually mastering all the material.

When a professor says, "Go ahead and work together," do not assume that anything goes. Professors often do not state the limits of collaboration explicitly. It is your responsibility to confirm the expectations for working together on each assignment or academic task.

Fabrication
- Creating false information or data and presenting it as fact.
- Making up false quotes, statements, data, or sources.
- Improperly manipulating another's data or ideas to support your own theories.
- Citing sources that were not used.
- Misrepresenting your academic accomplishments to instructors or employers.
- Making up false quotes, statements, data, or sources.
- Counterfeiting or falsifying records, including but not limited to a record of internship, or attendance at a required event.

Facilitation
- Helping or attempting to help another student engage in academic misconduct.
- Giving unauthorized help on any exam or assignment when not authorized.
- Giving test or assignment answers to students after such answers or information have been made available to you, but before they have been provided to other students.
- Completing an assignment or exam on behalf of another student.

Plagiarism
Plagiarism is the most common form of cheating. It involves using another person's original words, ideas, or research, including Internet material, without proper credit. Plagiarism can also include, but is not limited to:
- Failing to cite all used sources.
- Using another author's sentence or phrase structure without proper citation.
- Paraphrasing another's work without crediting the author or creator.
- Using another's original work or ideas (writing, art, music, mathematics, computer code, or scientific work) in whole or in part without crediting that person or using proper citation (e.g. footnotes, endnotes, etc.).
- Stating facts that are not common knowledge without citing the source.

Multiple submissions
Although the UW Bothell does not have a policy that prohibits submission of a single paper for credit in two different classes (regardless of quarter or class level), your individual professors may not permit the duplicate submission in their classes. If you want to make a multiple submission, you must obtain permission of both professors involved prior to submission of the work.

Sabotage
Sabotage or otherwise taking deliberate action to destroy or damage another's work.

Avoiding Misconduct
Common patterns in student behavior that increase stress and the temptation to cheat include: falling behind in coursework or leaving large projects until the last minute; working too many hours leaving little time to keep up with courses; taking too many difficult courses at one time; and emotional or health problems that distract from studies and interfere with concentration. University resources are

available to help students proactively learn ways to avoid misconduct (e.g. The Writing and Communications Center or the Quantitative Skills Center).

Behavioral Conduct

Admission to the University of Washington Bothell carries the responsibility to respect the rights, privileges, and property of other members of the University community and refrain from any conduct that interferes with University functions or endanger the health, welfare, or safety of other persons.

What is behavioral misconduct?

Behavioral misconduct includes but is not limited to:

- Disruption or obstruction of University teaching or administrative functions.
- Damaging or misusing university or personal property on university premises.
- Physical, verbal, or emotional abuse.
- Threats intended to create bodily harm or endanger the health or safety of others.
- Possession of firearms, explosives, or weapons.
- Sexual offenses such as rape, sexual assault, or sexual harassment.
- Stalking.
- Hazing or conspiracy to engage in hazing.
- Unlawful possession, use, or distribution of alcohol or controlled substances, or paraphernalia.
- Engaging in any behavior for the purposes of gaining an unfair advantage specifically prohibited by an instructor.
- Domestic violence or relationship violence.

The UW Bothell Conduct Process

The UW Bothell Conduct Process fosters student learning and development by promoting high standards of integrity and accountability. All members of the University community share responsibility for reporting all suspected incidents of student misconduct. Incidents may be reported online at:
http://www.uwb.edu/studentaffairs/studentconduct.

Instructors who suspect a student enrolled in their class academic misconduct will typically arrange a meeting with the student to discuss their suspicions. This pre-meeting is not required. During this meeting, the instructor may:

- Share evidence with the student, and explain how their conduct appears to violate the Student Conduct Code
- Offer the student an opportunity to dispute the allegation, and
- Provide the student with multiple options, which may include accepting a zero grade for the assignment or the course.
- Only after the incident is resolved, will faculty submit a grade for the assignment or the course.

If the instructor determines that the student is responsible for academic misconduct, the instructor will submit an incident report to the Division of Student Affairs. The Dean of Student Affairs or designee, who serves as the Vice Chancellor's Representative for Student Conduct, will:

Inform the student in writing that an incident report has been filed

Invite the student to attend an investigative interview with the Dean or designee.

Investigative Interview

Students asked to participate in the conduct process may choose to either meet with the Dean of Student Affairs or designee to offer testimony. Students found responsible for violating the Student Conduct Code could be required to provide restitution, and/or may receive a disciplinary reprimand, disciplinary probation, suspension, or dismissal. They may also appeal any sanction according to procedures established in the Code. Records of all disciplinary actions and appeals are retained in the Division of Student Affairs for a period of seven years.

Disciplinary Sanctions

The following disciplinary sanctions prescribed by the Student Conduct Code are typically supplemented by learning opportunities unique to each student and their developmental state.

Disciplinary Reprimand: written notification that the student has not met the University's standards of conduct, and that a repeated offense will result in more severe disciplinary action. First offenses do not automatically receive a warning; most first offenses receive a stricter response, with warnings reserved for cases with unusual mitigating circumstances.

Restitution: requirement that the student compensate the University or other persons for damages, injuries, or losses. Failure to comply results in canceled registration and a hold on future registration.

Disciplinary probation: an action that places conditions on the student's continued attendance at the University, including the statement that further violation of University policies will likely result in suspension or dismissal. The Conduct Officer or Hearing Board determines the term and conditions of academic probation. First offenses often result in probation.

Suspension: a written statement from the Faculty Appeal Board notifying the student that his or her attendance has been suspended for a specified period of time (e.g., one quarter). The statement includes the term of the suspension and conditions for re-admittance, if any. Any additional offenses of the student conduct code will likely result in dismissal.

Dismissal: a written statement from the president's delegate notifying a student that his or her attendance at the University has been permanently terminated for violating University policy.

Although the prospect of dismissal may seem the most serious consequence of dishonesty, there are others. If you apply to a medical, law, or other professional school, you may be required to provide a statement from the Dean of Student Affairs attesting to your good conduct.

The Student Conduct Code

Pursuant to chapter 34.05 RCW and the authority granted by RCW 28B.20.130, the board of regents of the University of Washington has established rules regarding student conduct and student discipline (code) that are set forth in chapter 478-121 WAC. The university has also developed agency-level policies and procedures regarding the code pursuant to chapter 34.05 RCW. See *Student Governance and Policies*, chapters 209 and 210.

A complete copy of these regulations, WAC 478-121, Standards of Conduct is available online and from the UW Bothell Division of Student Affairs. Selected sections follow.

WAC 478-121-100 Prohibited Conduct

Prohibited conduct under this code includes, but is not limited to, the prohibited conduct described in WAC 478-121-100 through 478-121-173 and relevant university policies. For additional interpretation of prohibited conduct, see *Student Governance and Policies*, chapter 210, student conduct policy for discriminatory and sexual harassment, intimate partner violence, sexual misconduct, stalking, and retaliation and chapter 209, student conduct policy for academic misconduct and behavioral misconduct.

478-121-040 Jurisdiction of the University

(1) The scope of the university's jurisdiction includes reports that prohibited conduct occurred:

(a) On any university premises or in connection with any university-sponsored program or activity, regardless of the location of the program or activity; or

(b) Off campus (i.e., conduct that does not occur on university premises or in the context of a university-sponsored program or activity) where: The university reasonably determines that the conduct adversely affects a university interest or, has continuing adverse effects or may create a hostile environment on university premises or in the context of a university-sponsored program or activity.

(2) Nothing in this conduct code shall be construed to limit academic action that may be taken by schools, colleges, or programs against a respondent based on an established violation of this conduct code that demonstrates a failure to meet the academic and/or professional standards of the school, college, or program.

(3) If a respondent withdraws from the university (or fails to reenroll) while a conduct proceeding is pending, the university may move forward with the conduct proceeding and, if so, the respondent will be provided with a continued opportunity to participate.

For updates on the student conduct code, please visit http://www.uwb.edu/studentaffairs/studentconduct.

VI. Baccalaureate Degrees & Minors

First Year and Pre-Major Program (FYPP)

The UW Bothell Lower Division Experience
FYPP courses are 100 and 200 level courses created to provide students with the skills to be successful in the 21st century workforce and to make meaningful contributions to local, regional, and global communities. All FYPP courses are oriented toward addressing vital issues of the contemporary world outside your door and in your lives.

The FYPP first-year curriculum is centered around the Discovery Core sequence and includes a range of electives that fulfill UW distribution requirements and prerequisite requirements for UW Bothell majors. Students have the opportunity to learn about biology, business, mathematics, literature, writing, psychology, sociology, computer science and philosophy not as isolated subjects, but rather as they interact with one another in the Discovery Core curriculum.

Throughout the pre-major experience, students are encouraged to pursue experiential learning opportunities, such as UW study abroad programs, internships, community-based learning and student leadership involvement.

The First Year Discovery Core Series
Discovery Core (DC) is a seminar sequence that enables first-year students to begin fulfilling their UW General Education requirements. The three-quarter series engages new students in a process of experiencing the richness of integrated learning across a variety of academic disciplines, orients them to UW Bothell's culture, integrates and improves their academic skills, and supports their sense of belonging to peers and to the university.

Students who take the sequenced DC curriculum become immersed in interdisciplinary, team-taught, small learning communities. The experience complements the broader University of Washington Bothell's learning climate. The campus takes pride in its accessible faculty, diverse student body and engaged learning. The DC courses are designed to support the overall FYPP mission to support the successful transition to college of first-year and pre-major students, and to provide the foundation on which they will continue scholarly and professional development. The FYPP Learning Goals focus on inclusive practices, critical and creative inquiry, ethics and social responsibility, quantitative and qualitative literacies, and communication.

First Year Autumn Quarter
Discovery Core I (5 and 10 credit options): The autumn DCI courses promote students' transition into the university and familiarity with campus resources; the development of analytic skills like writing and communication, information literacy, quantitative literacy and academic integrity; and the practice of making connections across academic disciplines and between the classroom and wider world.

The topics include, among others, Philosophical Explorations of Science Fiction, Sustainability, Global Business, Stereotypes, Youth Resistance & Social Change, the Future of Energy, Human Rights and more. Some are team-taught, some individually taught, but all of them will open your eyes to the richness of our complex world. These courses also count toward the UW general education requirements for graduation.

As part of the DC series, FYPP asks students to create an e-Portfolio that tells a story about the journey through their first year at UW Bothell. The e-Portfolio culminates with a reflection in DC III on how the "artifacts" of students' first-year work (essays, reports, projects, presentations, performances, art work, etc.) helped them achieve the FYPP Learning Goals.

First Year Winter Quarter
Discovery Core II (5 credits): The Winter Discovery Core II continues the work begun in the autumn, making a turn toward the practice of Undergraduate Research in which the skills of analysis, creativity, and collaboration are essential. Some of these courses include The Body as Ecosystem; Race, Gender, and Trauma; Great Rivers of the World; Music & Philosophy; Sustainable Business; The Culture of Native Americans in the Northwest, and more. Students continue to construct their first year e-portfolio and explore areas of personal interest. These courses, like all the rest, count toward the UW general education requirements.

Students also engage in the **Pathways to Academic Engagement Fair** during winter quarter. The Pathways to Academic Engagement Fair is a program dedicated to enhancing students' second year experiences and student success. The program encourages students' engagement with a combination of services, programs, professional development, curricular and co-curricular activities that provides a gateway between a student's college transition and their future aspirations. In short, it offers a foundation to explore the specific experiences and opportunities UW Bothell has to offer, especially those related to career development, interdisciplinary education, academic success, community involvement, and campus involvement.

First Year Spring Quarter
Discovery Core III (5 credits): The Spring DC III focuses on active reflection on the first year, on honing the students' skills as interdisciplinary researchers, and on the projection toward the second year of college. As students prepare to make the transition into their majors, they will work closely with their peers and professors on completing the e-portfolio in classes such as Democracy, Politics, and Freedom; Artificial Intelligence; Habits, Addiction & the Brain; Women's Empowerment; Travel Narratives; Mapping the Middle Ages, and more. These courses also count toward the UW general education requirements.

Additional First Year and Pre-Major Courses
In addition to Discovery Core courses each quarter, a variety of courses are available in Composition, Introductory Mathematics (Algebra and pre-calculus, up to and including an introductory Calculus for Life and Social Sciences), Foreign Languages, Leadership Development, and supplemental college skills development.

Interactive Media Design

(Jointly offered with the School of Science, Technology, Engineering, and Mathematics)

Bachelor of Arts in Interactive Media Design (BA)

Interactive Media Design (IMD) provides students with an expansive understanding of the processes and methods involved in conceiving, creating, and evaluating technology-mediated experiences. IMD students create media products ranging from video and immersive artworks to web-based and platform-specific apps while working in collaboration with their peers. With its interdisciplinary approach to interaction design and emphasis on studio practice, IMD enables students to develop creative solutions to complex problems. The two-year curriculum, grounded in an intensive cohort-based learning environment, blends academic theory, human-centered design, artistic technique, process management approaches, and methods for gathering and analyzing critical metrics.

IMD majors graduate with a design portfolio that prepares them for careers in the arts and industry, as well as for graduate study. They are uniquely qualified to pursue careers across employment sectors concerned with interaction design in

education, engineering, art, science, social media, and other forms of digital interactivity

Interactive Media Design Learning Objectives:
Upon completion of the IMD degree students will be able to:

- Understand and engage critically with theories and concepts related to analysis, design, development, and implementation of interactive media experiences and their social context.
- Use an interdisciplinary approach in the design and development of interactive media that applies methodologies and best practices from a variety of design approaches, including engineering, user-centered, inclusive, community-based, and universal.
- Collaborate effectively, creatively, productively, and ethically using team and communication skills imbued with respect and empathy.
- Create interactive media experiences that engage unequal relations of power, knowledge, and difference by learning from communities with multiple intersecting identities.
- Utilize a variety of technologies and tools to explore, develop, and deliver interactive experiences on commonly used platforms and infrastructure as well as on novel and experimental interfaces and systems.
- Write and communicate clearly at all stages of project research, design, and implementation.

Admission Requirements (20 credits): Minimum one course from each of the areas below with a minimum grade of 2.0.

1) English Composition: either B WRIT 134 or ENGL 131
2) Interactive Media/Design Thinking/Visual Arts: either BIS 209, BIS 233, BIS 236, B IMD 250 or approved alternative
3) Web Development and Programming: either B IMD 233, CSE 154, INFO 343, or approved alternative
4) Statistics/Quantitative Methods/Data Visualization: either BIS 232, BIS 315, B BUS 215, B MATH 215/BHS 215, STMATH 341, STAT 220, STAT 311, Q METH 201, or approved alternative

Major Requirements (75 credits)

1) Core (55 credits): Minimum grade of 2.0 in each of B IMD 351, B IMD 352, B IMD 353, B IMD 362, B IMD 363, B IMD 481, B IMD 482, B IMD 483, B IMD 491, B IMD 492, B IMD 493
2) Minimum 20 credits of 300-400 level electives.
3) Minimum 2.00 cumulative GPA in all courses applied to the major.

School of Business

Bachelor of Arts in Business Administration (Bothell campus and ELC-Bellevue)

Demand by individuals and companies in the local area led UW Bothell to establish a Bachelor of Arts in Business Administration in 1993. Conversations with regional business leaders resulted in the goal of providing students a strong background in critical thinking, ethics, teamwork, and written and oral communication skills. The School of Business expanded the location of its degree program with the launch of the Bachelor of Arts in Business Administration at the Eastside Leadership Center (ELC) in Bellevue in 2010. ELC-Bellevue students are admitted and graduate as UW Bothell students and have access to UW Bothell resources, services and activities.

The first courses taken for the major at the Bothell campus are six core courses designed to provide students with a strong base of business knowledge in essential fields of study. Students then may choose to

complete a formal option in Accounting, Marketing, or Supply Chain Management or one of five concentrations:

- Finance
- Management
- Management Information Systems (MIS)
- Marketing
- Retail Management
- Technology and Innovation Management (TIM)

Students who want to select courses to meet their individual goals may opt for self-directed study plan of business courses instead of a concentration. Students also take business and/or non-business electives, the number of courses depending on the selected option or concentration as well as individual learning goals. Two capstone courses complete the major requirements.

The first courses taken for the major at the ELC in Bellevue are nine core courses designed to provide students with a strong base of business knowledge in essential fields of study. Students then may choose to complete a formal option in Marketing or Supply Chain Management or one of the four concentrations:

- Entrepreneurship
- Finance
- General Business
- International Business

Students may also design a self-directed study plan from a combination of the courses offered within concentrations. Students also take additional business electives, either completing a second concentration or selecting courses from among the concentrations to meet individual goals. One capstone course completes the major requirements.

In addition, students in the ELC program participate in several unique features offered only in this innovative ELC-Bellevue program. This includes a unique cohort model with a focus on teambuilding and collaboration to prepare them for the world-of-work.

The School of Business emphasizes effective oral and written communication, teamwork in a diverse workforce, entrepreneurial management in high-tech companies, and skills for working in the global business environment. For students already employed in business, the program strengthens and refines critical skills and increases knowledge of the principles and techniques of sound business practice. For those seeking employment, the program offers a foundation for new careers in the rapidly changing regional and international economy.

As part of a public research university, the mission of the School of Business is to create, disseminate, and apply business knowledge to develop principled leaders and organizations in Washington and beyond**.** The Bachelor of Arts in Business Administration degree is fully accredited by The Association to Advance Collegiate Schools of Business (AACSB).

School of Business Undergraduate Admissions and Advising Office (Bothell Program)
Phone: 425-352-5113

Eastside Leadership Center Undergraduate Admissions and Advising Office
Phone: 425-352-3608

Bachelor of Arts in Business Administration (BA)

Admission Requirements

- A minimum of 60 quarter credits (80 preferred).
- A cumulative grade point average (GPA) of 2.5 or higher.
- Two years of a single foreign language in high school or two quarters of a single foreign language in college.
- Courses in advanced composition, statistics; calculus; introduction and fundamentals of financial accounting; managerial accounting; microeconomics; macroeconomics; introduction to law or business law; 10 credits of English Composition; 15 credits of

Natural Science (The Natural World); 15 credits of Humanities (Visual Literary and Performing Arts); 20 credits of Social Science (Individuals and Societies).

Writing Skills Assessment (WSA)
Applicants to the Business Administration program are required to complete an assessment of their writing and critical thinking skills (WSA) to be included with their application. Information on the test, test dates, and registration are on the Business Program website.

A SAT-Writing/SAT-Essay or ACT-Writing may be used in place of the Writing Skills Assessment (WSA), provided **one** of the following criteria is met:

- (Prior to March 2016) SAT-Writing scored 500 or above
- (NEW) SAT-Essay score of 6 or higher on the Writing and Analysis Dimension
- ACT-Writing score of 8 or higher in each of the 4 categories (Ideas & Analysis, Development & Support, Organization, and Language Use & Conventions)

Accounting Admission Requirements
Admissions to the Accounting option is competitive. Once admitted to the Business program, students may apply for the Accounting option.

Students must meet the following requirements to be eligible for consideration:

- Completed all required prerequisite Accounting courses with a minimum grade of 2.5 in each course.
    - Note: Applicants in the process of completing a course will not be considered for the Accounting option until the course has been completed.
- Earned a minimum 3.0 cumulative grade point average across all prerequisite Accounting courses.

Marketing Admission Requirements
Admissions to the Marketing option is not competitive; however, once admitted to the Business program, students must declare the Marketing option in order to pursue and earn that option.

Supply Chain Management Admission Requirements
Admissions to the Supply Chain Management option is competitive. Once admitted to the Business program, students may apply for the Supply Chain Management option.

Students must meet the following requirements to be eligible for consideration:

- Completed Calculus and Statistics with a minimum grade of 3.0 in each course.
- Completed BBUS/ELCBUS 340 with a minimum grade of 3.0.
    - Note: Applicants who have not completed BBUS/ELCBUS 340 will be conditionally admitted to the Supply Chain Management option. Students may not enroll in Supply Chain Management courses until the BBUS/ELCBUS 340 requirement has been met.

Graduation Requirements

- Completion of 90 credits or more at the upper-division level (300-400).
- Completion of at least 60 credits in business, with a minimum of 45 at UWB.
- Transfer courses must be upper-division and approved by the program. Contact advisor for policy.
- 10 credits of Writing courses.
- 3 credits of Diversity coursework.
- 45 of the final 60 credits must be completed in residence at UW Bothell.
- Achieve a minimum grade of 1.7 in every business course at UWB.
- Achieve a cumulative UW GPA of 2.0 or higher.
- Completion of all university and Business Program admission and graduation requirements.

Bachelor of Arts in Business Administration (BA) – Bothell campus

Program Structure
Summary of Credits:

Business Administration	***Credits***
Business Core	30
Business Electives/Concentration	20-25
General Electives	30
Capstone	10
Other UWB and/or transfer credits	90
Total	180

BA-Accounting Option	***Credits***
Business Core	30
Accounting Option	35
Accounting Option Electives	10
General Elective	5
Capstone	10
Other UWB and/or transfer credits	90
Total	180

BA-Marketing Option	***Credits***
Business Core	30
Marketing Option	15
Marketing Option Electives	15
General Elective	20
Capstone	10
Other UWB and/or transfer credits	90
Total	180

BA-Supply Chain Option	***Credits***
Business Core	30
Supply Chain Option	30
Supply Chain Option Electives	10
General Elective	10
Capstone	10
Other UWB and/or transfer credits	90
Total	180

Required Business Core (30 Credits)
B BUS/BBSKL 300 - Management of Organizations/Teamwork Skills
B BUS 307 - Business Writing
B BUS 310 - Managerial Economics -
B BUS 320 - Marketing Management
B BUS 340 - Operations and Project Management
B BUS 350 - Business Finance

Capstone (10 Credits)
B BUS 470 - Business Policy and Strategic Management
B BUS 480 - Global Environment of Business

General Electives (30 Credits)
Any 300-400 level classes from Business, Computer Software Systems, Interdisciplinary Arts & Sciences, Education and Science & Technology Programs at UWB or approved comparable upper-division transfer courses. A second business concentration or a minor may be completed.

Concentrations (20-25 Credits):

Finance (20 credits)
B BUS 451- Financial Policy and Planning
B BUS 453 - Financial Institutions and Markets
B BUS 454 - Investments
Plus one approved elective from:
B BUS 361 - Intermediate Accounting I
B BUS 373 - Cost Accounting
B BUS 455 - Financial Risk Management
B BUS 456 - Entrepreneurial Finance
B BUS 457 - Advanced Valuation
B BUS 459 - Special Topics in Finance
B BUS 465 - Applied Financial Accounting (No credits awarded for Accounting Option Students)
B BUS 490 - Special Topics in Business (When approved for concentration)
B BUS 491 - Business Consulting

Management (20 credits)
B BUS 472 - Managing Employees
B BUS 473 - Leadership and Decision Making
Plus two approved electives, from:
B BUS 330 - Information Management & Analysis
B BUS 401 - Work Motivation & Performance
B BUS 402 - Managing Work Teams
B BUS 441 - Business Project Management
B BUS 443 - Entrepreneurship Seminar
B BUS 444 - Product Development Lab
B BUS 460 - Sustainable Business
B BUS 461 - Business, Government & Society
B BUS 462 - Negotiations & Conflict Management
B BUS 471 - Entrepreneurial Management
B BUS 475 - Managing Innovation
B BUS 476 - New Technology & Future Markets
B BUS 477 - Human Resource Management
B BUS 479 - Special Topics in Management (When approved for concentration)
B BUS 490 - Special Topics in Business (When approved for concentration)
B BUS 491 - Business Consulting

Management Information Systems (25 credits)
MIS students need a computer programming class equivalent to CSS 142 before starting the MIS concentration. See CSS website for list of courses that apply.
B BUS 330 - Information Management and Analysis
CSS 142 – Computer Programming II or CSS 173 - Fundamentals of Programming Theory and Applications
CSS 360 - Software Engineering
B BUS 489 - Digital Business Lab
Plus one approved elective, from:
B BUS 431 - Electronic Marketing
B BUS 443 - Entrepreneurship Seminar
B BUS 444 - Product Development Lab
B BUS 460 - Sustainable Business
B BUS 479 - Special Topics in Management (When approved for concentration)
B BUS 491 - Business Consulting
CSS 371 - Business of Computing
CSS 475 - Database Systems
CSS 478 - Usability & User-Centered Design
CSS 480 - Principles of Human-Computer Interaction

Marketing Concentration (20 credits)
B BUS 423 - Marketing Intelligence
B BUS 438 - Marketing Management Lab
Plus two approved electives from:
B BUS 421 – Consumer Marketing
B BUS 426 - International Marketing
B BUS 427 - Entrepreneurial Marketing
B BUS 429 - Special Topics in Marketing
B BUS 431 - Electronic Marketing
B BUS 464 - New Product Marketing
B BUS 490 - Special Topics in Business (When approved for concentration)
B BUS 491 - Business Consulting

Retail Management (20 credits)
B BUS 445 - Merchandising Acquisition
B BUS 446 - Strategic Retail Promotion
B BUS 447 - Retail Operations & Supply Chain
B BUS 448 - Retail Technology and Leadership

Technology and Innovation Management (20 credits)
B BUS 475 - Managing Innovation
B BUS 476 - New Technologies and Future Markets
Plus two approved electives from:
B BUS 330 - Information Management & Analysis
B BUS 429 - Special Topics in Marketing (When approved for concentration)
B BUS 431 - Electronic Marketing
B BUS 441 - Business Project Management
B BUS 443 - Entrepreneurship Seminar
B BUS 444 - Product Development Lab
B BUS 460 - Sustainable Business
B BUS 471 - Entrepreneurial Management
B BUS 479 - Special Topics in Management (When approved for concentration)
B BUS 490 - Special Topics in Business (When approved for concentration)
B BUS 491 - Business Consulting

Options (30-45 Credits):

Accounting Option (35 credits)
B BUS 361 - Intermediate Accounting I
B BUS 362 - Intermediate Accounting II
B BUS 363 - Intermediate Accounting III
B BUS 373 - Cost Accounting

B BUS 411 - Auditing Theory & Practice
B BUS 435 - Accounting Information Systems
B BUS 450 - Federal Income Taxation
Plus two approved electives from:
B BUS 412 - Advanced Business Law
B BUS 449 - Accounting Practices in Not-for-Profit Organization
B BUS 451 - Financial Policy & Planning
B BUS 453 - Financial Institutions & Markets
B BUS 454 - Investments
B BUS 455 - Financial Risk Management
B BUS 456 - Entrepreneurship Finance
B BUS 459 - Special Topics in Finance
B BUS 463 - Advanced Financial Accounting
B BUS 467 - Advanced Taxation

Marketing Option (30 credits)
B BUS 421 - Consumer Marketing
B BUS 423 - Marketing Intelligence
B BUS 438 - Marketing Management Lab
Plus two approved electives from:
B BUS 426/ELCBUS 462 - International Marketing
B BUS 427 - Entrepreneurial Marketing
B BUS 429 - Special Topics in Marketing
B BUS 431/ELCBUS 401 - Electronic Marketing
B BUS 445 - Merchandise Acquisition
B BUS 446 - Strategic Retail Promotion
B BUS 464 - New Product Marketing
B BUS 490 - Special Topics in Business (When approved for concentration)
B BUS 491 - Business Consulting
B BUS/ELCBUS 497 - Guided Internship
B BUS/ELCBUS 499 - Undergraduate Research

Supply Chain Management Option (40 credits)
B BUS/ELCBUS 482 - Introduction to Supply Chain Management
B BUS/ELCBUS 483 - Global Sourcing
B BUS 441/ELCBUS 400 - Project Management
B BUS/ELCBUS 487 - Supply Chain Process Management (Capstone)
B BUS/ELCBUS 497 - Guided Internship or B BUS/ELCBUS 499 - Undergraduate Research
Plus one from the following (5 credits):
B BUS/ELCBUS 485 - Distribution and Logistics Management
B BUS/ELCBUS 486 - Supply Chain Management Resource Planning
Plus two from the following (10 credits):
B BUS 373 - Cost Accounting
B BUS 402 - Managing Teams
B BUS 447 - Retail Operations and Supply Chain Management
B BUS 460 - Sustainable Business
B BUS 462/ELCBUS 403 - Negotiations and Conflict Management
B BUS 463 - Advanced Financial Accounting
B BUS 464 - New Product Marketing
B BUS 473/ELCBUS 402 - Leadership and Decision Making
B BUS 475 - Managing Innovation

Bachelor of Arts in Business Administration (BA) ELC- Bellevue

Program Structure
Summary of Credits:

Business Administration	***Credits***
Business Core	45
Concentration	20
Business Electives	20
Capstone	5
Other UWB and/or transfer credits	90
Total	180

BA-Marketing Option	***Credits***
Business Core	45
Marketing Option	15
Marketing Option Electives	15
General Elective	10
Capstone	5
Other UWB and/or transfer credits	90
Total	180

BA-Supply Chain Option	***Credits***
Business Core	45
Supply Chain Option	30
Supply Chain Option Electives	10
Capstone	5
Other UWB and/or transfer credits	90
Total	180

***Required Business Core (4*5 Credits)**
ELCBUS 300 - Management of Organizations
ELCBUS 301 - Business Statistics
ELCBUS 310 - Managerial Economics
ELCBUS 320 - Marketing Management
ELCBUS 330 - Information Management and Analysis
ELCBUS 340 - Operations and Project Management
ELCBUS 350 - Business Finance
ELCBUS 380 - Introduction to Organizational Behavior
ELCBUS 382 - Business, Government, and Society

Capstone (10 Credits)
ELCBUS 470 - Business Policy and Strategic Management

WSA Score-Based Course (5 credits)
If the WSA score is lower than 4.0, an additional five credit of business communications is required. This course counts as a Business elective.

Concentrations (40 Credits)

Entrepreneurship (20)
ELCBUS 441 - Essentials in Venturing
ELCBUS 442 - New Venture Ideas
ELCBUS 443 - Venture Feasibility Analysis
ELCBUS 444 - Venture Start-up, Management and Growth

Finance (20 credits)
ELCBUS 451 - Financial Policy and Planning
ELCBUS 453 - Financial Institutions and Markets
ELCBUS 454 – Investments
ELCBUS 455 – Financial Risk Management

General Business (20 credits)
ELCBUS 400 - Business Project Management
ELCBUS 401 - Electronic Marketing
ELCBUS 402 - Leadership and Decision Making
ELCBUS 403 - Negotiations and Conflict Management

International Business (20 credits)
ELCBUS 461 - International Environment of Business
ELCBUS 462 - International Marketing
ELCBUS 463 - International Finance and Trade
ELCBUS 464 - History and Globalization

Options (30-45 Credits):

Marketing Option (30 credits)
B BUS 421 - Consumer Marketing
B BUS 423 - Marketing Intelligence
B BUS 438 - Marketing Management Lab
Plus two approved electives from:
B BUS 426/ELCBUS 462 - International Marketing
B BUS 427 - Entrepreneurial Marketing
B BUS 429 - Special Topics in Marketing
B BUS 431/ELCBUS 401 - Electronic Marketing
B BUS 445 - Merchandise Acquisition
B BUS 446 - Strategic Retail Promotion
B BUS 464 - New Product Marketing
B BUS 490 - Special Topics in Business (When approved for concentration)
B BUS 491 - Business Consulting
B BUS/ELCBUS 497 - Guided Internship
B BUS/ELCBUS 499 - Undergraduate Research

Supply Chain Management Option (40 credits)
B BUS/ELCBUS 482 - Introduction to Supply Chain Management
B BUS/ELCBUS 483 - Global Sourcing
B BUS 441/ELCBUS 400 - Project Management
B BUS/ELCBUS 487 - Supply Chain Process Management (Capstone)
B BUS/ELCBUS 497 - Guided Internship or B BUS/ELCBUS 499 - Undergraduate Research
Plus one from the following (5 credits):
B BUS/ELCBUS 485 - Distribution and Logistics Management
B BUS/ELCBUS 486 - Supply Chain Management Resource Planning
Plus two from the following (10 credits):
B BUS 373 - Cost Accounting
B BUS 402 - Managing Teams

B BUS 447 - Retail Operations and Supply Chain Management
B BUS 460 - Sustainable Business
B BUS 462/ELCBUS 403 - Negotiations and Conflict Management
B BUS 463 - Advanced Financial Accounting
B BUS 464 - New Product Marketing
B BUS 473/ELCBUS 402 - Leadership and Decision Making
B BUS 475 - Managing Innovation

Minors- Business Administration, Economics, and Retail Management

University of Washington students from all majors may earn a minor in Business Administration, Economics or Retail Management at UW Bothell. Students enrolled at UW Seattle and UW Tacoma will be authorized for cross-enrollment in order to pursue the minor. UW Seattle and UW Tacoma students should see their major program advisor to declare the minor. The Change of Major form must be submitted to the Registrar's Office at their home campus/program. Students will need to submit transcripts showing the completion of the required prerequisite course. Students must complete the prerequisite and be accepted to the minor before taking any minor courses at UW Bothell.

Business Administration Minor

Open to all UW Students not majoring in Business

Prerequisites
Students must earn a 2.7 cumulative GPA and a 2.7 prerequisite GPA with a minimum grade of 2.0 in each of the following prerequisite courses:

Microeconomics
Macroeconomics
Statistics
College Algebra (or higher)
One quarter 200-level Accounting

Program Requirements
The Business minor requires the completion of 25 credits of upper-division business courses including:

BBUS/BBSKL 300 Management of Organizations/Teamwork Skills
BBUS 310 Managerial Economics
BBUS 320 Marketing Management
BBUS 340 Operations & Project Management
Elective - Business Elective at the 300-400 level

Students may not enroll in upper-division Business courses until the Business minor prerequisite requirements have been met.

Three of the five courses in the Business minor must be completed at UW Bothell. Acceptance of transfer courses must be approved via petition to the School of Business.

Economics Minor
Open to all UW Students not majoring in Economics

Prerequisites
Students must earn a 2.7 cumulative GPA and a 2.7 prerequisite GPA with a minimum grade of 2.0 in each of the following prerequisite courses:
Statistics
Calculus

Economics Minor Program Requirements
The Economics minor requires the completion of 25 credits including:
B BUS 220 Principles of Microeconomics
B BUS 221 Principles of Macroeconomics
B BECN 300 Quantitative Methods for Economics
Electives - two (2) Economics electives at the 300-400 level

Students may not enroll in upper-division Economics courses until the Statistics and Calculus prerequisite requirements have been met.

Three of the five courses in the Economics minor must be completed at UW Bothell. Acceptance of transfer courses must be approved via petition to the School of Business.

Retail Management Minor

Open to all UW Students except Bothell Business students

Prerequisites
Students must earn a 2.7 cumulative GPA and a 2.7 minimum grade in:
B BUS 201 - Introduction to Business

Retail Management Minor Program Requirements
The Business minor requires the completion of 28-30 credits of upper-division business courses including:

B BUS/BBSKL 300 - Management of Organizations/Teamwork Skills
B BUS 320 - Marketing Management
B BUS 445 - Merchandising Acquisition
B BUS 446 - Strategic Retail Promotion
B BUS 447 - Retail Operations & Supply Chain
B BUS 448 - Retail Technology and Leadership

Students may not enroll in Retail Management courses until the B BUS 201 prerequisite requirement has been met.

Students may take MGMT 300: Leadership and Organizational Behavior and/or MKTG 301: Marketing Concepts, at the UW Seattle campus to satisfy the requirements of B BUS 300 and B BUS 320, respectively. The UW Seattle campus courses are four credits each. Students who take one of these courses at Seattle will complete the Retail Management minor with 29 credits; students who take both of these courses at UW Seattle will complete the minor with 28 credits.

School of Educational Studies

Bachelor of Arts in Educational Studies (BA)

The **Bachelor of Arts in Educational Studies** focuses on critical issues in education with particular emphasis placed on inquiry, teaching and learning, diversity, and social justice. The course of study is structured to nurture multiple perspectives, understanding of diverse learners, and inquiry to teaching and learning while also building professional skills to address challenges in educating diverse students in the 21st century. Educational Studies provides foundational knowledge for career paths that include adult education, educational nonprofit and support programs, business consulting and professional development, and policy study.

The **Elementary Education option** of the Educational Studies degree prepares students for recommendation for Washington State Teacher Certification with an endorsement in Elementary Education, Students are also required to choose a concentration in either Special Education or English Language Learners to add one of these endorsements. Successful completion the option will prepare students to begin teaching in kindergarten through eighth grade (K-8) settings upon graduation.

Admissions
Admission to **Educational Studies** may be declared following the completion of 45 credits of college coursework and one college level English composition course with a minimum grade of 2.0.

Admission to the **Elementary Education option** is capacity constrained and requires a second, internal application once 90 credits are achieved. Applicants interested in pursuing the Elementary Education option should clearly indicate this on their application to the University. Application requirements to the Elementary Education option include:

- Admission to the Educational Studies Major
- Completion of at least two of the four Educational Studies core courses with a minimum GPA of 3.0 *(Note: Applicants in the process of completing required Education courses may submit an application to the option.)*
- 30 hours of documented experience with elementary and/or middle school children in a US public school classroom within the last two years Passing WEST-B scores, or equivalent SAT or ACT scores (see website for SAT/ACT equivalencies)
- Documentation of academic breadth*. For each subject area listed below, applicants must document completed college courses, including the year taken and grades. A

minimum grade of 2.0 (or grade of C) in each academic breadth course is required.

- Social Sciences – 2 courses from two different social science areas (e.g. U.S. History, sociology, geography, economics, political science, global studies, gender studies, etc.)
- English – 2 courses, 1 must be in composition and 1 can be in any area of English literature or writing.
- Science – 2 courses from two different science areas, 1 lab required (e.g. biology, chemistry, climate science, oceanography, geology, physics, etc.)
- Math - 2 courses, one should focus on Math for Teachers* and one can be in any other math area 100 level and above.
- Fine Arts – 1 course focusing on the creation of or practice of an area of fine art (e.g. drawing, dance, music, photography).

- Three letters of recommendation (academic, professional, and experience with children)
- Admission Essays

* *Certification option requires demonstrated content knowledge through completion of 35 credits of coursework in other academic disciplines; lower division, transfer courses, and Education electives may be used to fulfill these requirements, which overlap with University Area of Knowledge requirements.*

Prospective UW Bothell Students must also fulfill:

- All university admission requirements for transfer or international applicants.

Transfer: www.uwb.edu/admissions/transfer/admission-requirements-tr

International: http://www.uwb.edu/admissions/international/intladm/intltransadv

- English Proficiency Requirement: All applicants for whom English is a non-native language must provide proof of English proficiency. This includes international students and domestic students who completed most of primary and secondary education outside the USA. See http://www.uwb.edu/admissions/engprof for more details.

Degree Program Requirements:

Educational Studies Major:

Educational Studies Core Courses (20 cr)
B EDUC 205 – Education and Equity in the US (5 cr)
B EDUC 210 – Teaching and Learning in a Multicultural Society (5 cr)
B EDUC 300 – Research and Educational Knowledge (5 cr)
B EDUC 310 – Theories of Learning, Culture, and Identity (5 cr)

Education Electives (25 cr)
See www.uwb.edu/education for at list of accepted courses

Elective Courses Across UW Bothell (25 cr)
See www.uwb.edu/education for a list of accepted courses

Capstone Series (10 cr)
B EDUC 399 – Capstone Seminar (3 cr)
B EDUC 495 – Applied Experience (5 cr)
B EDUC 499 – Capstone Project (5 cr)
TOTAL=80 credits

Elementary Education Option:

Educational Studies Core Courses (20 cr)
Teaching Foundations and K-8 Pedagogy (35 cr)
Advanced Pedagogy and Internship (30 cr)
Special Education or English to Speakers of other languages Requirement (20 cr)
TOTAL=95

Recommendation for State Teacher Certification with an Elementary Education Endorsement requires the following items in addition to the successful completion of coursework:

- Ability to pass a criminal background check,
- Achieve a passing score on the NES tests
- Achieve a passing score on the edTPA test

- Achieve a passing score on the ESOL or SPED WEST-B test (for ESOL or SPED endorsement)

For a full course list and more details about the Elementary Education Option, please visit our website at www.uwb.edu/education.

Graduation Requirements:
Completion of all degree requirements
Completion of a minimum of 15 credits in each Areas of Knowledge
180 or more total credits
90 credits must be upper-division (300-400 level)
Completion of last 45 credits at UW Bothell
Overall grade-point average of 2.0 or higher

Education and Society Minor

The Education and Society Minor is intended to help students develop broad perspectives on the purposes and forms of education and schooling. It consists of a minimum of 25 credits of coursework and is open to all majors.

B EDUC 220 Education and Society (5 cr) is required for the Minor.
Any of the following Education Program courses can be applied to the Minor:
B EDUC 210 – Teaching and Learning in a Multicultural Society
B EDUC 230 Culture, Knowledge, and Education (5 cr)
B EDUC 250 Topics in Education and Popular Culture (5 cr, max. 10)
B EDUC 300 – Research and Educational Knowledge
B EDUC 315 History of Education in U. S. Schools (5 cr)
B EDUC 330 Race, Culture and Identity in the Classroom (5 cr)
B EDUC 391 Special Topics in Education (1-5 cr, max. 10)
B EDUC 392 Independent Study (1-5cr, Max10, must have faculty sponsor)
B EDUC 452 Service Learning (2 cr) (may take 2x; B EDUC 452 is always attached to a class.)
B EDUC 456 Adolescents in School and Society (5 cr)
B EDUC 460 Moral Dimensions of Education (5 cr)
B EDUC 461 Educational Implications of Gender Inequality (5 cr)
B EDUC 470 – Disability Culture in Schools and Society
B EDUC 474 Global Englishes (5cr)
B EDUC 475 Global Diversity and Citizenship Education (3 cr)
B EDUC 476 New Literacies for Digital Learning (5 cr)
B EDUC 480 Life and Learning in the Middle School (3 cr)
B EDUC 491 Special Topics in Education (1-5 cr, max. 15)
B EDUC 493 Environmental Education (3 cr)
B EDUC 522 Education and the American Dream (3 cr) (must have senior standing to enroll)

Students may choose up to 5-credits from the following designated courses in other programs to use towards the 25 credits required for the Minor:

BIS 219 The Politics of Sex Education (5cr)
BIS 225 Applied Social Psychology (5cr)
BIS 226 Foundations of U.S. Social Services (5 cr)
BIS 328/B EDUC 328 Diversity, Leadership, and Engagement: Match (1-5cr, max. 20) (formerly BIS BIS 494 Task Force: Match Leadership Cohort)
BIS 443 Educational Policy and the American Economy (5 cr)
BIS 445 Meanings and Realities of Inequality (5 cr)
BISIA 484 Arts Learning in the Community (5-10 cr, max. 10 cr)
BHLTH 465 Adolescent Health (5 cr)

Other requirements:

- A 2.0 GPA is required for general admission to the Minor in Education.
- 20 credits of numerically graded coursework must be counted toward the Minor.
- A grade of 2.0 or better is required in each course credited for the Minor.
- B EDUC 452 Service Learning is only graded CR/NC.

Teaching & Learning Minor

The Teaching and Learning Minor is for students in any major who want to strengthen their knowledge

of teaching in schools or other community settings. Develop a deeper understanding of topics that impact teachers and educators at all levels such as human development and learning, pedagogy, and diversity in the classroom. Several classes in this Minor provide opportunities to observe and volunteer in formal and informal educational settings. The Teaching and Learning Minor is comprised of 6 courses (30 credits) that, when taken together, lay a strong foundation for future educators in a wide variety of settings.

Required Courses:
B EDUC 220 Education and Society (5cr) I&S OR
B EDUC 230 Culture, Knowledge, and Education (5cr) I&S

and
B EDUC 315 History of Education in the United States (5 cr) I&S
B EDUC 330 Race, Culture and Identity in the Classroom (5 cr)
B EDUC 456 Adolescents in School and Society (5 cr) I&S
B EDUC 470 Disability Culture in Schools and Society (5 cr)
B EDUC 476 New Literacies for Digital Learning (5 cr)

School of Interdisciplinary Arts and Sciences

The School of Interdisciplinary Arts and Sciences offers students advanced interdisciplinary study in the arts and sciences. Students develop their ability to think analytically, critically and imaginatively; communicate logically and persuasively; and work creatively with others. These abilities prepare students to participate in workplace and civic leadership in a democratic society, to enrich their personal lives and their communities, and to appreciate and care for the natural environment. A liberal education develops both the knowledge underlying technical and professional learning, and the values on which enterprises, institutions, and global civilization depend.

Admission Requirements
Applicants applying to an Interdisciplinary Arts & Science major with 80 or more credits:

- 3 years high school math (2 years algebra) or Intermediate Algebra in college. Minimum grade of 2.0 if taken in college.
- Two years (high school) OR 10 quarter credits (college) of a single foreign language or through 102 with a passing grade.
- English Composition (ten quarter credits)
- Quantitative/Symbolic Reasoning (five quarter credits in Math or Logic). Does not apply to students who enrolled in college for the first time prior to Autumn Quarter, 1985.
- 15 quarter credits in Natural World (NW)
- 15 quarter credits in Visual, Literary, and Performing Arts (VLPA)
- 15 quarter credits in Individuals and Societies (I&S)

The following majors have additional admission prerequisites:: Law, Economics & Public Policy; Science, Technology & Society; Mathematical Thinking and Visualization; the BA in Environmental Studies and the BS in Environmental Science.

Applicants applying to an Interdisciplinary Arts and Sciences major with 45-79 credits:

- Same as above, but only 10 credits needed in each of the Areas of Knowledge (Natural World; Visual, Literary and Performing Arts; Individuals and Societies).

Graduation Requirements
Students pursuing an Interdisciplinary Arts and Sciences BA or BS degree must complete the individual program requirements and Interdisciplinary Arts and Sciences School requirements, in addition to the general graduation requirements of the University.

School of Interdisciplinary Arts and Sciences Requirements

Interdisciplinary Inquiry (BIS 300)
The purpose of Interdisciplinary Inquiry (BIS 300) is to introduce and orient students to upper-division work in Interdisciplinary Arts and Sciences (IAS) courses. It encourages students to take intellectual risks with the goal of improving their abilities to read closely, write and think critically, communicate clearly and creatively, research effectively, and work collaboratively. Faculty teaching the core work closely with the staff in the Library, the Writing Center, and/or the Quantitative Skills Center, thus introducing students to the rich variety of resources and support services available to them at UW Bothell. Students are encouraged to think about how various types of knowledge are socially produced, how they as students can become active, creative, and self-critical producers of knowledge (in either academic or non-academic genres), and why IAS as a whole values interdisciplinary modes of inquiry. While individual sections of BIS 300 differ in their modes and emphases, they all encourage students to:

- Understand and appreciate the interdisciplinary production of knowledge and the ways in which it underwrites different aspects of IAS;
- Gain a critical understanding of IAS diverse and interrelated (inter) disciplinary fields and methods of inquiry;
- Become better critical thinkers and writers, ones who are capable of posing, answering, and reposing a variety of complex questions;
- Become better researchers, ones who are able to use the resources at UW Bothell and elsewhere in order to identify existing and complementary scholarly work while producing original knowledge through data gathering and interpretation;
- Become better speakers, ones who are able to communicate clearly and engagingly about complicated topics, arguments, and issues;
- Learn to work well collaboratively, as both learners and teachers.

Portfolio Capstone (BIS 499)
The Portfolio Capstone (BIS 499) is a 3-credit course that will focus on the completion of a student's final learning/professional portfolio, picking up on the work they have completed in BIS 300 Interdisciplinary Inquiry and throughout the program. It will allow students to step back from the learning they have done in individual courses, focusing on the connections among those courses and the links between the student's overall academic accomplishments and their diverse contexts. Students should save their graded papers and projects so their work can be included in their final portfolio. BIS 499 is a writing-intensive (W) course. Students must receive a minimum grade of 2.5 in the Portfolio Capstone to satisfy the graduation requirement.

Interdisciplinary Practice & Reflection (IPR)
The Interdisciplinary Practice and Reflection (IPR) requirement ensures that all IAS students complete at least one course that requires an advanced research, creative, or experiential learning project before they graduate. IAS courses meeting this requirement are low-enrollment and high-impact. They typically involve close engagement with a faculty member and assume prior study in the area. These courses allow students to complete a project that draws on their academic interests and furthers their life ambitions. The project might be a seminar paper in a particular area of study; an academic internship in a relevant field; a service-learning project that builds on the student's academic work; a study abroad opportunity; an art and media project or production. Courses that satisfy the IPR requirement ask students to reflect on the value, challenges, and effectiveness of their work in relation to their undergraduate education as a whole.

List of courses that satisfy the IPR requirement*

- BIS 403 Washington DC Seminar on Human Rights
- BIS 438 Prevention and Promotion
- BIS 483 Community Organizing

- BIS 480 International Study Abroad
- BIS 490 Advanced Seminar
- BIS 492 Senior Thesis (10 credits)
- BIS 494 Task Force
- BIS 495 Internship
- BIS 496 Community Service Project
- BIS 497 Political Internship in State Government
- BIS 498 Undergraduate Research
- BISCP 489 Projects in Community Psychology
- BISIA 401 Literary Journal Editorial Board
- BISIA 410 Advanced Creative Writing Workshop
- BISIA 440 Advanced Visual and Media Arts Workshop
- BISIA 450 Image and Imagination
- BISIA 483 Advanced Arts Workshop
- BISIA 484 Arts Learning in the Community
- BISMCS 402 Community Media Practice
- BISMCS 472 Advanced Media Production Workshop
- BES 462/3/4 Restoration Ecology Capstone (10 credits)
- BES 498 Independent Research in Environmental Science
- BISSKL 400 Policy Journal Editorial Board
- BISSKL 402 Peer Facilitation
- B IMD 495 Interaction Design Studio
- Any Graduate Course Offered in IAS

*All IAS students must complete at least 5 credits of IPR coursework. This requirement can be satisfied by one 5-credit course or multiple lower-credit courses. Students should talk with faculty members in their major and consult their degree webpages as they decide which of the courses listed above fit best with their academic training and life goals. Because artifacts produced in these courses are ideal for inclusion in students' capstone portfolios, the IPR requirement should be satisfied prior to BIS 499. Many of the courses listed above have prerequisites, applications processes, priority registration for specific majors, or other requirements for enrollment. Please check the IAS website and course catalog for details.

Areas of Knowledge

25 credits must be completed in each Area of Knowledge. The Areas of Knowledge are: Visual, Literary and Performing Arts (VLPA), Individuals and Societies (I&S), and Natural World (NW). Multiply-designated courses may not be double-counted as fulfilling two areas of Knowledge. Courses may apply to both an Area of Knowledge requirement and a major requirement.

Upper Division Credit Policy

Of the credits applying to most IAS major requirements, a minimum of 48 must be completed at the Upper Division (300-400) level. The minimum credit requirement varies by majors.

Non-Matriculated Status

No credits taken in non-matriculated status may count toward major requirements. Credits taken in non-matriculated status will count as electives only.

Major Requirements:

American & Ethnic Studies (BA)

(Classes in this major are offered primarily during daytime hours.)

How have culture, power, and dissent shaped the diverse populations of the United States in relation to the larger world?

American & Ethnic Studies investigates the social forces, political institutions, and cultural productions that have created the United States and shaped what it means to be an "American." This major will help you develop a critical understanding of the categories that have shaped the emergence and reproduction of systems of power defined in relation to national citizenship. We pay particular attention to diverse and intersecting categories of race, place, ethnicity, gender, sexuality, class, nationality, and ability. Our courses examine the relationships between power, inequality, resistance, social and environmental justice, and difference. Using various scholarly methods, American & Ethnic Studies makes connections between past and present conditions. We educate students in historical and social inquiry,

textual analysis and interpretation, and critical theory and practice.

American & Ethnic Studies degree prepares students for careers in governmental, community-based, nonprofit or social justice organizations, or for graduate programs in legal, cultural, and historical fields.

While there are no official prerequisites, students choosing this major will find it helpful to have completed college coursework in American history, culture, and/or social structures.

American & Ethnic Studies (AES) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
BISAES 305 Power, Dissent, and American Culture (5 credits)
BIS 312 Approaches to Social Research OR BIS 340 Approaches to Cultural Research (5 credits)
AES Courses (30 credits) to include a minimum of 5 credits from each of the following areas:

- Historical and Social Inquiry
- Textual Analysis and Interpretation
- Critical Theory and Practice

BIS 499 Portfolio Capstone (min.2.5) (3 credits)
Additional IAS Coursework (20 credits)

Total = 68 Credits

American & Ethnic Studies (AES) Courses:
Key:** AES listing dependent upon topic

A. Introduction to American & Ethnic Studies (AES core course)
BISAES 305 Power, Dissent, and American Culture

B. Skills & Methods
BIS 312 Approaches to Social Research
BIS 340 Approaches to Cultural Research

C. Critical Theory and Practice (CTP) 5 credits
BIS 204 Introduction to Journalism
BIS 216 Introduction to Cultural Studies
BIS 219 The Politics of Sex Education
BIS 221 Gender and Sexuality
BIS 224 Introduction to Feminist Studies
BIS 242 Environmental Geography
BIS 255 Critical Diversity Studies
BIS 275 Social Problems
BIS 310 Women, Culture, and Development
BIS 325 Disability and Human Rights
BIS/BEDUC 328 Diversity, Leadership and Engagement
BIS 330 Democratic Capitalism in the United States
BIS 338 Political Institutions and Processes
BIS 352 Mapping Communities
BIS 353 Human Rights in Theory and Practice
BIS 372 Representation, Colonialism, and the Tropical World
BIS 403 Washington D.C. Seminar on Human Rights
BIS 410 Topics in Qualitative Inquiry
BIS 414 Topics in Human Rights
BIS 415 Public Policy and Law
BIS 418 Masculinity, Homoeroticism, and Queer Theory in American Culture
BIS 431 Issues in Sexual Politics and Cultures
BIS 433 Gender, Work, and Family
BIS 443 Educational Policy and the American Economy
BIS 445 Meanings and Realities of Inequality
BIS 446 Science, Expertise, and Public Policy
BIS 448 Social Policy
BIS 455 Literature and Sexuality
BIS 465 Performance, History, and Memory
BIS 468 Human Rights and Sustainable Development
BIS 483 Community Organizing
BISAES 364 Public Memory and Dissent in American Culture
BISAES 367 Race, Ethnicity, and Immigration
BISAES 368 Sex, Love, Romance
BISCLA 318 Performance, Identity, Community, and Everyday Life
BISGST 362 Contemporary Political Ideas and Ideologies
BISSEB 304 Institutions and Social Change
BISSEB 331 The Family in U.S. Society
BISSEB 333 The Individual and Society
BISSTS 307 Science, Technology, and Society
B EDUC 220 Education and Society
B EDUC 475 Global Perspectives on Diversity and Citizenship Education

D. Historical and Social Inquiry (HS) 5 credits
BIS 224 Introduction to Feminist Studies
BIS 256 Introduction to African American Studies
BIS 257 Introduction to Asian American Studies
BIS 258 Introduction to Latino/Latina Studies
BIS 265 Introduction to Comparative Ethnic Studies
BIS 266 United States History to 1865
BIS 267 United States History from 1865
BIS 280 U.S. Political Processes
BIS 323 History of Photography
BIS 327 History of U.S. Labor Institutions
BIS 335 Human Rights in America
BIS 345 American Environmental Thought
BIS 347 History of American Documentary Films
BIS 357 Native American Religious and Philosophical Thought
BIS 362 The United States-Mexico Borderlands: Culture, History, Theory
BIS 370 Nineteenth-Century American Literature
BIS 371 Twentieth-Century American Literature
BIS 372 Representation, Colonialism, and the Tropical World
BIS 379 American Ethnic Literature
BIS 383 American Art and Architecture
BIS 389 American Indian Literature
BIS 391 Environmental History of the Pacific Northwest
BIS 406 Urban Planning & Geography
BIS 418 Masculinity, Homoeroticism, and Queer Theory in American Culture
BIS 419 Urban Politics and Policy
BIS 423 The City in American Culture
BIS 425 Topics in United States Social and Political History
BIS 443 Educational Policy and the American Economy
BIS 445 Meanings and Realities of Inequality
BIS 463 U.S. Women's History
BIS 465 Performance, History, and Memory
BIS 466 Human Rights and Resistance
BIS 481 Modernism, Postmodernism, and American Culture
BIS 483 Community Organizing
BISAES 363 Conflict, and Connection in the Americas
BISAES 364 Public Memory and Dissent in American Culture
BISAES 367 Race, Ethnicity, and Immigration
BISAES 368 Sex, Love, and Romance

E. Textual Analysis and Interpretation (TAI) 5 credits
BIS 216 Introduction to Cultural Studies
BIS 233 Participatory Media Culture
BIS 235 Critical Media Literacy
BIS 238 Language, Identity, Culture and Power
BIS 256 Introduction to African American Studies
BIS 257 Introduction to Asian American Studies
BIS 258 Introduction to Latino/Latina Studies
BIS 265 Introduction to Critical Ethnic Studies
BIS 323 History of Photography
BIS 335 Human Rights in America
BIS 345 American Environmental Thought
BIS 347 History of American Documentary Films
BIS 357 Native American Religious and Philosophical Thought
BIS 361 Studies in American Literature
BIS 370 Nineteenth-Century American Literature
BIS 371 Twentieth-Century American Literature
BIS 375 Mexican Art and Culture
BIS 378 The Language of Poetry
BIS 379 American Ethnic Literatures
BIS 383 American Art and Architecture
BIS 387 Women and American Literature
BIS 389 American Indian Literature
BIS 407 Children's Literature and Reader Response Criticism
BIS 418 Masculinity, Homoeroticism, and Queer Theory in American Culture
BIS 455 Literature and Sexuality
BIS 466 Human Rights and Resistance
BIS 470 Art, Politics, and Social Change
BIS 481 Modernism, Postmodernism, and American Literature
BIS 487 Topics in American Literature
BISAES 364 Public Memory and Dissent in American Culture
BISAES 368 Sex, Love, Romance
BISAES 369 American Culture and Mass Media
BISCLA 384 Literary and Popular Genres
BISMCS 333 Media and Communication Studies

Community Psychology (BA)

(Classes in this are offered primarily during daytime hours.)

Community psychology examines social problems and promotes the well-being of people in their communities. While the field draws heavily from psychology, it also draws from theory and practice in sociology, community development, ecology, public health, anthropology, cultural and performance studies, public policy, social work, and social justice movements. Through community research and action, community psychologists produce knowledge that can inform social policies, social service work, helping practices, and community change.
The Community Psychology major provides rigorous academic preparation for students who wish to pursue careers in human services, community development mental health, family and youth programs, counseling, prevention, program evaluation, community arts, multicultural program development, and human relations. The major also prepares students for graduate work in a variety of academic and applied research fields including Psychology, Sociology, Counseling, Public Health, and social work as well as interdisciplinary graduate work in the arts, humanities, and social sciences including Cultural Studies and Policy Studies.

Effective in Autumn 2019, BIS 170 Introduction to Psychology (or equivalent) will become a major prerequisite. For applicants who plan to apply to CP prior to Autumn 2019, it's strongly recommended to complete BIS 170 or equivalent. Useful preparation for this major includes coursework in psychology, sociology, anthropology, public policy, statistics and/or research methods. Students will need strong skills in writing, speaking, collaboration, and community-based work.

Community Psychology (CP) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
BIS 312 Approaches to Social Research - min. 2.0 grade (5 credits)
BIS 315 Understanding Statistics – min. 2.0 grade (5 credits)
BISCP 343 Community Psychology (5 credits)
CP Courses (25 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)
Additional IAS Coursework (20 credits)

Total= 68 credits

Community Psychology (CP) Courses:
A. CP Core Course
BISCP 343 Community Psychology

B. Methods Courses
BIS 312 Approaches to Social Research
BIS 315 Understanding Statistics
BIS 410 Topics in Qualitative Inquiry
BIS 447 Topics in Quantitative Inquiry

C. Community Psychology Courses
BIS 219 The Politics of Sex Education
BIS 220 Developmental Psychology
BIS 223 Introduction to Narrative Ethnography
BIS 225 Social Psychology
BIS 226 Foundations of U.S. Social Service
BIS/B EDUC Critical Diversity Studies
BIS 270 Abnormal Psychology
BIS 316 Topics in Psychology
BIS 318 Education and Society
BIS 325 Disability and Human Rights
BIS 335 Human Rights in America
BIS 337 Risk and Resilience
BIS 348 Cultural Psychology
BIS 349 Personality Psychology
BIS 352 Mapping Communities
BIS 364 Realities & Representations of Adolescent Development
BIS 368 Women's Lives in Context
BIS 384 Health, Medicine and Society
BIS 422 Clinical Psychology
BIS 433 Gender, Work, and Family
BIS 434 Psychology and the Visual Arts
BIS 436 Comparative Family Systems
BIS 437 Narrative Psychology
BIS 438 Prevention and Promotion
BIS 445 Meanings and Realities of Inequality
BIS 446 Science, Expertise and Public Policy
BIS 448 Social Policy
BIS 449 Advanced Topics in Psychology

BIS 450 Performance and Healing
BIS 483 Community Organizing
BISAES 305 Power, Dissent, and American Culture
BISAES 367 Exploring American Culture: Race, Ethnicity, and Immigration
BISCLA 318 Performance, Identity, Community, and Everyday Life
BISCP 489 Projects in Community Psychology
BISSEB 304 Institutions and Social Change
BISSEB 331 The Family in U.S. Society
BISSEB 333 The Individual & Society
BISSEB 359 Ethics and Society
BBIO 310 Brain & Behavior
BEDUC 220 Education and Society
BEDUC 456 Adolescents in School and Society
BEDUC 461 Education and Gender Inequality

Culture, Literature & the Arts (BA)

The Culture, Literature & the Arts major (CLA) inquires into the make-up of diverse cultures and societies, and their literatures and arts. Students in the major study written and visual texts, interactive and performative modes of practice, and philosophical and theoretical accounts of those texts and practices. They gain an understanding of the complex relations among lived, represented, and speculated existence. CLA courses focus on the historical, social, and aesthetic dimensions of arts and culture, with special attention to the intersections among gender, sexuality, race, ethnicity, class, disability, and other vectors of power and privilege.

CLA majors graduate with an ability to pursue inquiry across a broad range of endeavors and to become engaged, reflective, and productive global citizens. The major is excellent for careers that demand strong written and verbal communication capabilities, such as law, publishing, public relations, journalism, web content production, museum and bookstore management, and teaching. CLA majors may also advance their studies by pursuing graduate degrees in a range of disciplinary and interdisciplinary fields that engage the humanities. More information about career possibilities or pursuing graduate school on our web site.

While there are no official prerequisites, students choosing this major will find it helpful to be able to write an analytical paper and should have at least two courses in literature, the visual arts, or performance. Historical knowledge and competency in foreign languages is also highly desirable.

Culture, Literature & the Arts (CLA) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
CLA Core (5 credits)
CLA Courses (35 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)
Additional IAS Coursework (20 credits)

Total= 68 Credits

Culture, Literature & the Arts (CLA) Courses:
Key: ** CLA listing dependent upon topic.

A. Introduction to Culture, Literature and the Arts (CLA core courses)
BISCLA 318 Performance, Identity, Community and Everyday Life
BISCLA 380 Art and Its Context
BISCLA 384 Literary and Popular Genres

B. Creative Writing
BISIA 207 Introduction to Creative Writing: Words, Stories, Dialogues
BISIA 310 Creative Writing: Poetry
BISIA 311 Creative Writing: Prose
BISIA 410 Advanced Creative Writing Workshop

C. Art, Film, and Literary Histories
BIS 206 Engaging Literary Arts
BIS 208 Experimenting through the Arts
BIS 209 Engaging Visual and Media Arts
BIS 212 Engaging Performing Arts
BIS 263 Literature into Film
BIS 301 Narrative Forms
BIS 309 History of Dance in Europe and America
BIS 321 Human Rights and the Arts
BIS 347 History of American Documentary Film
BIS 361 Studies in American Literature
BIS 370 Nineteenth Century American Literature
BIS 371 Twentieth Century American Literature
BIS 378 Languages of Poetry

BIS 379 American Ethnic Literatures
BIS 382 The Visual Art of Biology
BIS 383 American Art and Architecture
BIS 387 Women and American Literature
BIS 389 American Indian Literature
BIS 407 Children's Literature and Reader Response Criticism
BIS 465 Performance, History, and Memory
BIS 471 Women in Art
BIS 476 Issues in Art History
BIS 481 Modernism, Postmodernism, and American Literature
BISIA 230 Performing Arts Technique
BISIA 250 Photography as Art
BISIA 240 Visual and Media Arts Techniques
BISIA 283 Interdisciplinary Art Techniques
BISIA 319 Interdisciplinary Arts
BISIA 340 Visual and Media Arts Workshop
BISIA 344 Video Art
BISIA 350 Photography and Digital Art
BISIA 383 Interdisciplinary Arts Workshop
BISIA 450 Image and Imagination
BISIA 483 Advanced Interdisciplinary Arts Workshop
BISIA 484 Arts Learning in the Community

D. Thought and Theory
BIS 308 Issues in Philosophy and Culture
BIS 345 American Environmental Thought
BIS 357 Native American Religious and Philosophical Thought
BIS 452 Marx, Nietzsche, Freud
BIS 461 Studies in U.S. Intellectual and Cultural History

E. Culture Studies
BIS 203 History of InterArts
BIS 204 Introduction to Journalism
BIS 205 Technologies of Expression
BIS 216 Introduction to Cultural Studies
BIS 223 Introduction to Narrative Ethnography
BIS 233 Participatory Media Culture
BIS 235 Critical Media Studies
BIS 236 Introduction to Interactive Media
BIS 238 Language, Identity, Culture and Power
BIS 256 Introduction to African American Studies
BIS 260 Introduction to World Religions
BIS 264 Africa on Film
BIS 265 Introduction to Comparative Ethnic Studies
BIS 310 Women, Culture and Development
BIS 313 Issues in Media Studies
BIS 317 Language, Society and Cultural Knowledge
BIS 322 Topics in Performance Studies
BIS 325 Disability and Human Rights
BIS 329 **Topics in Mathematics Across the Curriculum
BIS 339 Issues in Global Cultural Studies
BIS 340 Approaches to Cultural Research
BIS 341 Topics in the Study of Culture
BIS 348 Cultural Psychology
BIS 351 Topics in American Culture
BIS 354 Modern European Intellectual History
BIS 369 Women Across Cultures
BIS 372 Representation, Colonialism, and the Tropical World
BIS 373 Cultural History of Rome
BIS 375 Mexican Art and Culture
BIS 417 Paris: The City and Its History
BIS 418 Masculinity, Homoeroticism, and Queer Theory in America
BIS 424 Topics in American Studies
BIS 434 Psychology and the Visual Arts
BIS 450 Performance and Healing
BIS 455 Literature and Sexuality
BIS 464 Topics in Advanced Cinema Studies
BIS 470 Art, Politics, and Social Change
BIS 474 Topics in European Cultural History
BIS 478 Art Patronage and Markets
BIS 486 Studies in Women and Literature
BIS 487 Topics in American Literature
BIS 488 Topics in British Literature
BISAES 364 Public Memory and Dissent in American Culture
BISAES 367 Exploring American Culture: Race, Ethnicity, and Immigration
BISAES 368 Sex, Love, Romance
BISAES 369 American Culture and Mass Media
BISMCS 333 Media and Communication Studies
B EDUC 474 Global Englishes

F. Historical Epochs
BIS 266 United States History to 1865
BIS 267 United States History from 1865
BIS 323 History of Photography
BIS 402 Modern China

Environmental Science (BS)

The Bachelor of Science in Environmental Science prepares students to address environmental challenges facing the world today. Environmental Science students in each of the major's two degree pathways (Conservation & Restoration Ecology and Earth System Science) develop the depth of scientific understanding, interdisciplinary perspectives, and creative problem-solving skills needed to design and bring about solutions to these problems at local, regional, and global scales.

Through community-based projects ranging from wetlands restoration and conservation planning to analyses of regional air and water pollution, students gain practical experience and make a positive difference while they are still in school.

Like all Interdisciplinary Arts & Sciences (IAS) degrees, the Bachelor of Science in Environmental Science focuses on five core learning objectives: collaboration and shared leadership; critical and creative thinking; diversity and equity; interdisciplinary research and inquiry; and writing and communication. These learning objectives are developed and documented through the IAS degree portfolio process, a process that begins with the school core course and concludes with the Portfolio Capstone. IAS emphasizes these learning objectives because they allow students to hone their abilities in writing, speaking, quantitative reasoning and information literacy. These skills position students to participate in workplace and civic leadership in a democratic society, to enrich their personal lives and their communities and to appreciate and care for the natural environment. More information about career possibilities or pursuing graduate school on our web site.

Students majoring in Environmental Science choose one of the following two pathways:

- Conservation and Restoration Ecology (CRE)
- Earth System Science (ESS)

Prerequisites for admission to the BS in Environmental Science:
One quarter of Calculus (ST MATH 124 or B MATH 144 or equivalent)
Three quarter General Chemistry sequence (B CHEM 143/144, 1553/154, 163/164 or equivalent)
One introductory Earth System Science course (BIS/BST 153, BIS/BST 154, BIS 242, BST 200 or equivalent)
One introductory Environmental Studies course (BIS 240 or BIS 243 or equivalent)
Completion of the prerequisites for either the Conservation & Restoration Ecology (CRE) pathway or the Earth Systems Science (ESS) pathway

CRE pathway prerequisites:
Three quarter introductory Biology sequence (B BIO 180, 200, 220 or equivalent)

ESS pathway prerequisites:
One quarter of introductory Biology (B BIO 180 or equivalent)
One quarter introductory Physics (B PHYS 114 or equivalent)
A second quarter of introductory Physics (B PHYS 115 or equivalent) or a second quarter of Calculus (B MATH 125 or equivalent)

Graduation Requirements

CRE Pathway Requirements:

Environmental Science Core Requirements (27 credits)

- BIS 300 Interdisciplinary Inquiry* (5 credits)
- BES 301 Science Methods and Practice (5 credits)
- BIS 315 Understanding Statistics (5 credits)
- BES 303 Environmental Monitoring Practicum (2 credits)
- BES 312 Ecology (5 credits)
- BIS 342 Geographic Information Systems OR BES 439 Computer Modeling & Visualization in Environmental Science (5 credits)

CRE Core Course Requirements (20 credits)

- BES 316 Ecological Methods (5 credits)
- BES 362 Intro to Restoration Ecology (5 credits)
- BES 485 Conservation Biology (5 credits)
- BES 311 Environmental Chemistry OR BES 318 Hydrogeology (5 credits)

CRE Distribution Requirements (20 Credits)

- Environmental Science (5 credits)
- Methods & Practices (5 credits)
- Society & Environment (5 credits)
- Environmental Policy & Management (5 credits)

Capstone (13 Credits)

- BES 462, 463, 464 Capstone or approved Independent Research (10 credits)
- BIS 499 Portfolio Capstone - min. 2.5 grade (3 credits)**

TOTAL = 80 Credits

Earth System Science Pathway Requirements:

Environmental Science Core Requirements (27 Credits)

- BIS 300 Interdisciplinary Inquiry* (5 credits)
- BES 301 Science Methods and Practice (5 credits)
- BIS 315 Understanding Statistics (5 credits)
- BES 303 Environmental Monitoring Practicum (2 credits)
- BES 312 Ecology (5 credits)
- BIS 342 Geographic Information Systems OR BES 439 Computer Modeling & Visualization in Environmental Science (5 credits)

ESS Core Course Requirements (15 Credits)

- BES 311 Environmental Chemistry (5 credits)
- BES 315 Environmental Chemistry Laboratory (5 credits)
- BES 318 Hydrogeology (5 credits)
- BES 321 Geomorphology (5 credits)
- BES 330 Limnology (5 credits)

ESS Distribution Requirements (25 Credits)

- Environmental Science (5 credits)
- Methods & Practices (10 credits)
- Society & Environment (5 credits)
- Environmental Policy & Management (5 credits)

Capstone (13 Credits)

- BES 462, 463, 464 Capstone or approved Independent Research
- BIS 499 Portfolio Capstone - min. 2.5 grade (3 credits)**

TOTAL = 80 Credits

Pathway Distribution Courses

Environmental Science	
Conservation & Restoration Ecology (CRE)	**Earth Systems Science (ESS)**
BES 311 Environmental Chemistry BES 318 Hydrogeology BES 331 Estuarine Science and Management BES 341 Natural Hazards and Human Disasters BES 397 Special Topics in Environmental Science BES 430 Air Pollution and Health BES 488 Wetland Ecology BES 489 Pacific Northwest Ecosystems BES 490 Pacific Northwest Plants in Restoration & Conservation BIS 241 Nature in the Northwest BIS 306 Marine Diversity and Conservation BIS 395 Environmental Change in Washington State	BES 331 Estuarine Science and Management BES 341 Natural Hazards and Human Disasters BES 362 Introduction to Restoration Ecology BES 397 Special Topics in Environmental Science BES 430 Air Pollution and health BES 485 Conservation Biology BES 488 Wetland Ecology BES 489 Pacific Northwest Ecosystems BES 490 Pacific Northwest Plants in Restoration & Conservation BIS 241 Nature in the Northwest BIS 306 Marine

BST 200 Introduction to Climate Science	Diversity and Conservation BIS 395 Environmental Change in Washington State BST 200 Introduction to Climate Science
Methods & Practices	
Conservation & Restoration Ecology (CRE)	**Earth Systems Science (ESS)**
BES 302 Environmental Problem Solving BES 317 Soils Laboratory BES 321 Geomorphology BES 330 Limnology BES 342 Introduction to Geographic Information Systems BES 415 Advanced Environmental Measurements Laboratory BES 439 Computer Modeling & Visualization in Environmental Science BES 440 Remote Sensing of the Environment BES 460 Water Quality BES 487 Field Lab in Wildland Plants and Soils BES 490 Pacific Northwest Plants in Restoration & Conservation BIS 232 Introduction to Data Visualization BIS 343 Geographic Visualization BIS 442 Advanced GIS Analysis and Applications	BES 302 Environmental Problem Solving BES 316 Ecological Methods BES 317 Soils Laboratory BES 342 Introduction to Geographic Information Systems BES 415 Advanced Environmental Measurements Laboratory BES 439 Computer Modeling & Visualization in Environmental Science BES 440 Remote Sensing of the Environment BES 460 Water Quality BES 487 Field Lab in Wildland Plants and Soils BES 490 Pacific Northwest Plants in Restoration & Conservation BIS 232 Introduction to Data Visualization BIS 343 Geographic Visualization BIS 344 Intermediate GIS BIS 442 Advanced GIS Analysis and Applications

Society & Environment	
Conservation & Restoration Ecology (CRE)	**Earth Systems Science (ESS)**
BIS 240 Introduction to Sustainable Practices BIS 242 Environmental Geography BIS 244 Wetlands Discovery (2 credit) BIS 307 Environmental Justice BIS 345 American Environmental Thought BIS 356 Ethics and the Environment BIS 358 Issues in Environmental Science BIS 359 Principles & Controversies of Sustainability BIS 390 Ecology and the Environment BIS 391 Environmental History of the Bioregion BIS 392 Water and Sustainability BIS 396 Topics in Sustainability BIS 405 Environmental Education BIS 411 Biotechnology and Society BIS 458 Energy, Environment & Society BIS 459 Conservation and Sustainable Development BBUS 460 Sustainable Business	BIS 240 Introduction to Sustainable Practices BIS 242 Environmental Geography BIS 244 Wetlands Discovery (2 credit) BIS 307 Environmental Justice BIS 345 American Environmental Thought BIS 356 Ethics and the Environment BIS 358 Issues in Environmental Science BIS 359 Principles & Controversies of Sustainability BIS 390 Ecology and the Environment BIS 391 Environmental History of the Bioregion BIS 392 Water and Sustainability BIS 396 Topics in Sustainability BIS 405 Environmental Education BIS 458 Energy, Environment & Society BIS 459 Conservation and Sustainable Development BBUS 460 Sustainable Business
Environmental Policy & Management	
Conservation & Restoration Ecology (CRE)	**Earth Systems Science (ESS)**
BES 486 Watershed Ecology & Management BIS 307 Environmental Justice	BES 486 Watershed Ecology & Management BIS 307 Environmental Justice

BIS 346 Topics in Environmental Policy BIS 406 Urban Planning & Geography	BIS 346 Topics in Environmental Policy BIS 406 Urban Planning & Geography

Note: Students should refer to the Bachelor of Science in Environmental Science website for the most up-to-date course lists: http://www.uwb.edu/environmental-science

Environmental Studies (BA)

(Classes in this major are offered primarily during daytime hours.)

The Bachelor of Arts in Environmental Studies is designed for students who want to act critically and creatively in response to the environmental challenges facing the world today. The major's two pathways (Sustainability and Society [**S&S**] and Conservation Science and Management [**CSM**]) share a commitment to educating future practitioners who can address those challenges in their professional careers and personal lives.

Environmental Studies teaches students to integrate environmental knowledge across the natural and social sciences, as well as the arts and humanities. Hands-on learning, field experiences, and problem-based instruction focus on finding answers to complex problems that include scientific, social, political, cultural, and ethical dimensions.

Graduating Environmental Studies students develop careers in management, planning, advocacy, communications, and policy-making across a wide array of for-profit and not-for-profit organizations. They also pursue disciplinary and interdisciplinary graduate education in environmental fields that range across the arts, humanities, and social and natural sciences.

Prerequisites:
Two introductory lab courses in Biology, Chemistry OR Earth Systems Science (may be from two different areas)
One introductory Statistics course (BIS 232, BIS 315 or equivalent). Students can be admitted to the major without having met this requirement if they enroll in BIS 315 during their junior year.

Environmental Studies Requirements:
BIS 300 Interdisciplinary Inquiry
BIS 243 Introduction to Environmental Studies
BES 301 Science Methods & Practice OR BIS 312 Approaches to Social Research
BES 312 Ecology OR BIS 390 Ecology and the Environment
BIS200/BBUS 220, BIS 320, BISGST 324, BIS 394 or equiv. Economics (Political Economy or Environmental Economics)
BIS 356 Ethics and the Environment OR BIS 345 American Environmental Thought
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)

Pathway Requirements- choose Sustainability & Society or Conservation Science & Management
Sustainability and Society (S&S) (10 Credits)
BIS 240 Introduction to Sustainable Practices (5 credits)
BIS 359 Principles & Controversies of Sustainability (5 credits)
BIS 392 Water & Sustainability (5 credits)
BIS 396 Topics in Sustainability (5 credits)
BIS 459 Conservation & Sustainability Development (5 credits)
BIS 468 Human Rights and Sustainable Development (5 credits)
BIS 483 Community Organizing (5 credits)
-OR-

Conservation Science & Management Pathway (CSM)(10 Credits)
BIS 342 Geographic Information Systems (5 credits)
BES 485 Conservation Biology (5 credits)
Distribution Requirements --Both Pathways (20 Credits)
Environmental Science (5 credits)
Methods & Practice (5 credits)
Society & Environment (5 credits)
Policy & Management (5 credits)

TOTAL= 63 credits

Environmental Studies (ES) Distribution Courses:

Environmental Science

BES 311 Environmental Chemistry
BES 318 Hydrogeology
BES 331 Estuarine Science and Management
BES 341 Natural Hazards and Human Disaster
BES 362 Introduction to Restoration Ecology
BES 397 Special Topics in Env. Science
BES 460 Water Quality
BES 485 Conservation Biology
BES 488 Wetland Ecology
BES 489 Pacific Northwest Ecosystems
BES 490 Pacific NW Plants in Restoration & Conservation
BIS 241 Nature & the Northwest
BIS 242 Environmental Geography (if not used as a prerequisite)
BIS 306 Marine Diversity and Conservation
BIS 390 Ecology and The Environment
BIS 395 Environmental Change in WA State
BST 200 Introduction to Climate Science (if not used as a prerequisite)

Methods & Practices

BES 303 Environmental Monitoring Practicum (2 credits)
BES 316 Ecological Methods
BES 317 Soils Laboratory
BES 415 Advanced Environmental Measurements Laboratory
BES 439 Computer Model. & Visual in Environmental Science
BES 440 Remote Sensing of the Environment
BES 460 Water Quality
BES 462 Restoration Ecology Capstone: Introduction
BES 463 Restoration Ecology Capstone: Proposal and Plan
BES 487 Field Lab Wildland Plants and Soils
BES 490 Pacific Northwest Plants in Restoration & Conservation
BIS 232 Introduction to Data Visualization
BIS 340 Approaches to Cultural Research
BIS 342 Geographic Information Systems
BIS 343 Geographic Visualization
BIS 344 Intermediate GIS
BIS 405 Environmental Education
BIS 410 Topics in Qualitative Inquiry
BIS 442 Advanced GIS Analysis and Applications
BIS 483 Community Organizing
BISGWS 303 Approaches to Feminist Inquiry
BEDUC 493 Environmental Education

Society & Environment

BES 302 Environmental Problem Solving
BIS 240 Introduction to Sustainable Practices
BIS 242 Environmental Geography (if not used as a prerequisite)
BIS 244 Wetlands Discovery (2-3 credits)
BIS 282 Globalization
BIS 307 Environmental Justice
BIS 320 Comparative Political Economies
BIS 345 American Environmental Thought
BIS 353 Human Rights Theory and Practice
BIS 356 Ethics and the Environment
BIS 358 Issues in Environmental Science
BIS 359 Principles & Controversies of Sustainability
BIS 391 Environmental History of the Pacific Northwest
BIS 392 Water and Sustainability
BIS 394 Comparative Economic Development
BIS 396 Topics in Sustainability
BIS 397 Topics in Environmental Studies
BIS 458 Energy, Environment and Society
BIS 459 Conservation and Sustainable Development
BIS 468 Human Rights and Sustainable Development
BISGST 303 History and Globalization
BISGST 324 International Political Economy
BISGST 362 Contemporary Political Ideas and Ideologies
BISSEB 304 Institutions and Social Change
BISSEB 359 Ethics and Society
BBUS 460 Sustainable Business

Environmental Policy & Management

BES 362 Intro.to Restoration Ecology
BES 464 Restoration Ecology Capstone: Field Site Restoration
BES 485 Conservation Biology
BES 486 Watershed Ecology and Management
BIS 307 Environmental Justice
BIS 338 Political Institutions and Processes
BIS 346 Topics in Environmental Policy
BIS 406 Urban Planning and Geography
BIS 415 Public Policy and Law

BIS 419 Urban Politics and Policy
BIS 446 Science, Expertise, and Public Policy
BIS 458 Energy, Environment and Society
BPOLST 492 Topics in Policy Research
BST 445 Political Economy of Energy

Gender, Women & Sexuality Studies (BA)

(Classes in this major are offered primarily during day time hours.)
Whose stories are we not hearing? How do feminist scholars and activists challenge those silences?

Gender, Women & Sexuality Studies (historically referred to as Women's Studies) is a cutting edge interdisciplinary field that examines social and political realities shaped by gender, sexuality, and power. We approach topics from transnational and intersectional perspectives, enabling students to analyze and address issues of gender, sexuality, and social difference at personal, historical, institutional, and structural levels. In our classes we study texts, histories, and experiences from the Global North and South, and examine gender and sexuality as they intersect with race, class, ethnicity, nation, ability, cisgender privilege and other forms of power.

GWSS is devoted to generating and bringing visibility to many kinds of feminist knowledge production such as women of color feminism, transfeminism, queer feminism, feminist science and technology studies, and more. GWSS scholars therefore represent a wide range of disciplinary backgrounds, and conduct research in the humanities, social sciences, natural sciences, and arts.

While there are no official prerequisites beyond the requirements for admission into the School of Interdisciplinary Arts & Sciences, students choosing this major will find it especially helpful to have completed college coursework in feminist studies, history and culture, sociology, or literature.

Gender, Women & Sexuality Studies (GWSS) Requirements:
BIS 300 Interdisciplinary Inquiry* (5 credits)
BISGWS 301 Critical Gender and Sexuality Studies (5 credits)
BISGWS 302 Histories and Movements of Gender and Sexuality or BISGWS 303** Approaches to Feminist Inquiry (5 credits)
GWSS Coursework (30 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)Additional IAS Coursework (20 credits)

TOTAL = 68 credits

** GWSS faculty HIGHLY recommend students take both BISGWS 302 & 303. If a student completes both BISGWS 302 and BISGWS 303, 5 credits from these courses can be applied toward the student's GWSS coursework requirement.

A. Core Courses (10 credits)
All students will be required to take 10 credits of core courses.
BISGWS 301 Critical Gender and Sexuality Studies (5 credits)
BISGWS 302 Histories and Movements of Gender and Sexuality (5 credits) or BISGWS 303 Approaches to Feminist Inquiry (5 credits)

B. GWSS Coursework (30 credits)
BIS 219 The Politics of Sex Education
BIS 221 Gender and Sexuality
BIS 224 Introduction to Feminist Studies
BIS 310 Women, Culture & Development
BIS 324 Gender, Human Rights, and Global Cinema
BIS 368 Women's Lives in Context
BIS 369 Women Across Cultures
BIS 387 Women and American Literature
BIS 418 Masculinity, Homoeroticism & Queer Theory in America
BIS 431 Issues in Sexual Politics and Cultures
BIS 433 Gender, Work and Family
BIS 455 Literature and Sexuality
BIS 463 U.S. Women's History
BIS 471 Women in Art
BIS 486 Studies in Women and Literature
BISAES 368 Sex, Love, Romance
BISSEB 331 The Family in U.S. Society

Global Studies (BA)

Global Studies (GST) majors explore the cultural, political, and economic systems that bind people

across the world. They gain the historical perspective needed to assess claims about "globalization," and develop the critical and analytical skills necessary to understand the forces that shape our world. Global Studies emphasizes critical research skills, historical depth, and the use of a range of theories and frameworks. Those may include theories of representation, political economy, feminism, nationalism, human rights, social movements, critical development studies, and postcolonialism.

Faculty who teach in GST work across a wide range of disciplinary and interdisciplinary fields, including history, anthropology, the arts, feminist studies, sociology, political economy, critical race studies, cultural and media studies, geography, environmental studies, and human rights. GST students learn to think critically about the history and practice of globalization through interpretation, empirical research, digital mapping and other forms of project-based learning.

Graduating GST students are particularly well-equipped to pursue professional careers in areas that are focused on the ways in which we globally interact today. These include international relations, non-governmental organizations, law, education, journalism, environmental justice, global health, business, policy and advocacy, and philanthropic organizations. GST students are also prepared for advanced study in geography, gender studies, anthropology, history, media and cultural studies, political science, and international studies. For more information about career possibilities or pursuing graduate school, please visit our web site.

Global Studies (GST) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
BISGST 303 History and Globalization (5 credits)
Methods course (5 credits)
GST Courses (30 credits)
BIS 499 Portfolio Capstone -min. 2.5 grade (3 credits)
Additional IAS Coursework (20 credits)

TOTAL = 68 credits

Global Studies (GST) Courses:
A. GST Core Course
BISGST 303 History and Globalization

B. Methods Courses
BES 301 Science Methods and Practice
BIS 312 Approaches to Social Research
BIS 315 Understanding Statistics
BIS 340 Approaches to Cultural Research
BIS 342 Geographic Information Systems

C. GST Courses
Global Studies
BIS 282 Globalization
BIS 339 Issues in Global Cultural Studies
BIS 480 International Study Abroad
BISGST 362 Contemporary Political Ideas and Ideologies
BISGST 397 Topics in Global Studies
BISGST 497 Advanced Topics in Global Studies
B EDUC 474 Global Englishes

History
BIS 334 Traditional Chinese History
BIS 354 Modern European Intellectual History
BIS 372 Representation, Colonialism, and the Tropical World
BIS 373 Cultural History of Rome
BIS 402 Modern China
BIS 417 Paris: The City and Its History
BIS 420 Colonizing History in Sub-Saharan Africa

Comparative Studies
BIS 257 Introduction to Asian American Studies
BIS 260 Introduction to World Religions
BIS 328 Contemporary European Politics
BIS 374 Middle East Politics
BIS 436 Comparative Family Systems

Human Rights
BIS 325 Disability and Human Rights
BIS 353 Human Rights in Theory and Practice
BIS 403 Washington D.C. Seminar on Human Rights
BIS 414 Topics in Human Rights
BIS 466 Human Rights and Resistance
BIS 468 Human Rights and Sustainable Development

Gender
BIS 224 Introduction to Feminist Studies
BIS 310 Women, Culture and Development
BIS 471 Women in Art
BISGWS 304 Gender, Women, and Sexuality Studies

Environment
BIS 242 Environmental Geography
BES 341 Natural Hazards and Human Disasters
BIS 459 Conservation and Sustainable Development

Political Economy
BIS 218 Power of Maps

BIS 230 Mathematical Thinking for the Liberal Arts
BIS 232 Introduction to Data Visualization
BIS 284 International Relations
BIS 320 Comparative Political Economies
BIS 394 Comparative Economic Development
BIS 441 Global Labor Markets
BISGST 324 International Political Economy

Cultural Politics
BIS 233 Participatory Media Culture
BIS 264 Africa on Film
BIS 317 Language, Society and Cultural Knowledge
BIS 352 Mapping Communities

BIS 375 Mexican Art and Culture
BISAES 305 Power, Dissent, and American Culture
BISAES 363 Conflict and Connections in the Americas
BISAES 367 Exploring American Cultures: Race, Ethnicity and Immigration
BISMCS 333 Media and Communication Studies

Interdisciplinary Arts (BA)

(Classes in this major are offered primarily during daytime hours.)

Interdisciplinary Arts (IA) gives students the opportunity to develop expertise in areas spanning written, visual, performance, sound and video, digital, and publication arts as they respond to the constantly evolving world of contemporary arts practice.

The IA major is built on the belief that meaningful contributions to art can be made by anyone from any class, ethnicity, race, nationality, gender, ability, and background. IA faculty implement critical and relevant thinking and practices in art in order to inspire students to push towards new engagements and achievements.

The degree focuses on helping students to think in innovative and experimental ways while developing independent and collaborative projects that cultivate artistic skills . Coursework in the IA major includes a core class on interdisciplinary arts theory and practice (BISIA 319) and studio-based workshops. It enables students to develop strategies for artistic and social practice.

Students in the IA major explore the many ways in which artists and their art publicly address complex cultural, philosophical and political phenomena. The curriculum emphasizes research-based art production, while addressing questions of media and genre as these are being transformed through current art practices. In each of these settings students gain production skills and develop their critical thinking, historical and aesthetic awareness, and cultural and digital literacy. Taught by faculty who are practicing artists with national and international public profiles, the curriculum actively engages in current discourses about embodiment and performance, conceptual and post-studio production, curation and installation, and spoken and material languages.

Students take classes in acting, collage, dance, drawing, experimental writing, improvisation, installation, internet art, painting, performance, photography, poetry, prose, public art, publishing, video, and hybrid and interdisciplinary arts.

Interdisciplinary Arts graduates become independent artists, build careers in arts and cultural industries as curators and administrators, and develop arts-based projects in a range of employment sectors, including health, media, and education. They are also prepared for graduate education in the arts and humanities, cultural studies, and are qualified to enter Master of

Fine Arts programs. For more information about career possibilities or pursuing graduate school, please visit our web site.

Interdisciplinary Arts (IA) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
BISIA 319 Interdisciplinary Arts (5 credits)
Art Studios and Art Workshops (15 credits)
IA Courses (20 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)
Additional IAS Coursework (20 credits)
TOTAL= 68 credits

Interdisciplinary Arts (IA) Courses:
A. IA Core Course
BISIA 319 Interdisciplinary Arts

B. Art Studios and Art Workshops
BIS 450 Performance and Healing
BISIA 207 Introduction to Creative Writing: Words, Stories, Dialogues
BISIA 230 Performing Arts Techniques
BISIA 240 Visual and Media Arts Techniques
BISIA 250 Photography as Art
BISIA 283 Interdisciplinary Art Techniques
BISIA 310 Creative Writing: Poetry
BISIA 311 Creative Writing: Prose
BISIA 340 Visual and Media Arts Workshop
BISIA 344 Video Art
BISIA 350 Photography and Digital Art
BISIA 383 Interdisciplinary Arts Workshop
BISIA 410 Advanced Creative Writing Workshop
BISIA 450 Image & Imagination
BISIA 483 Advanced Interdisciplinary Arts Workshop
BISIA 484 Arts Learning in the Community

C. IA Courses
BIS 203 History of InterArts
BIS 206 Engaging Literary Arts
BIS 208 Experimenting With the Arts
BIS 209 Engaging Visual and Media Arts
BIS 212 Engaging Performing Arts
BIS 263 Literature into Film
BIS 301 Narrative Forms
BIS 309 History of Dance in Europe and America
BIS 322 Topics in Performance Study
BIS 323 History of Photography
BIS 347 History of American Documentary Films
BIS 348 Cultural Psychology
BIS 369 Women across Cultures
BIS 373 The Cultural History of Rome

BIS 378 Languages of Poetry
BIS 382 Visual Arts of Biology
BIS 383 American Art and Architecture
BIS 417 Paris: The City and its History
BIS 431 Sexual Politics and Cultures
BIS 434 Psychology and the Visual Arts
BIS 460 Topics in Critical Theory
BIS 464 Topics in Advanced Cinema Studies
BIS 470 Art, Politics, and Social Change
BIS 471 Women in Art
BIS 474 Topics in European Cultural History
BIS 476 Issues in Art History
BIS 486 Studies in Women and Literature
BISAES 367 Exploring American Culture: Race, Ethnicity, and Immigration
BISCLA 318 Performance, Identity, Community, and Everyday Life
BISCLA 380 Art and its Context
BISCLA 384 Literature and Popular Genres
BISIA 401 Literary & Arts Journal
BISMCS 333 Media and Communication Studies

Individualized Study (BA)

Individualized Study is designed for highly-motivated students who want to create their own course of study. Students work closely with one or more faculty mentors in IAS or other programs at UWB as they shape a degree suited to their intellectual and professional interests and ambitions.

Individualized Study allows students to create degree options in subjects ranging from science communication and environmental education to gender studies and digital arts. The resulting student-driven curriculum includes formal and informal meetings between students and their faculty mentors, along with a portfolio-based process of self-reflection on the learning as it evolves. Students interested in pursuing the Individualized Study option work with a faculty member to develop a substantive proposal. This

proposal is then reviewed by a faculty oversight committee. Once approved, requirements vary from proposal to proposal.

Graduating students develop careers and pursue graduate education in a wide variety of fields, depending on their chosen area of study. As important, they gain experience and document success in one of the crucial predictors of success in any of those fields: the ability to undertake a self-directed project in collaboration with others, to reflect critically on its development in process, and to complete it in a timely fashion.
Students cannot apply directly to this major. Students apply in their junior year after they have completed at least one quarter of coursework in IAS, including BIS 300. Standard UW and IAS degree requirements including BIS 300, the portfolio capstone, and areas of knowledge, remain in effect, as they do for all other IAS degree options and majors, with a total of 180 credits required for graduation.

Law, Economics & Public Policy (BA)

(Classes in this major are offered primarily during day time hours.)

Law, Economics & Public Policy (LEPP) major is designed for students who want to explore how legal institutions shape policy decisions and the political and economic contexts that influence the creation of the law. The degree provides a grounding in economics and political science as students learn to analyze legal and policy problems, alternatives, and consequences.

LEPP curriculum combines theoretical analysis and practical experience through applied coursework and undergraduate research, community-based learning and academic internship opportunities, and the possibility of contributing to and working on the UW Bothell Policy Journal. Like all IAS degrees, LEPP emphasizes core capacities in critical and creative thinking, interdisciplinary research, collaboration and shared leadership, and writing and communication.

Students in LEPP build a powerful foundation for careers with non-governmental organizations, policy analysis think-tanks, and local, state, and federal government. LEPP graduates are prepared to undertake graduate study in law, policy studies, public policy, and management, among other fields.

Prerequisites:
In addition to the general admission requirements, students must have completed the following prerequisites to be considered for admission to the Bachelor of Arts in Interdisciplinary Studies: Law, Economics and Public Policy:

Microeconomics (BIS 200/ BBUS 220, ECON 200 or equivalent)
Introduction to American Government or American Politics (BIS 175, BIS 280, POL S 202 or equivalent)

Law, Economics & Public Policy (LEPP) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
BISLEP 301 Law, Economics & Public Policy (5 credits)
BISLEP 302 Policy Analysis (5 credits)
BIS 315 Understanding Statistics (5 credits)
Additional Skills & Methods coursework (5 credits)
Policy Foundation courses (10 credits)
Policy Foundation or Policy Problem courses (10 credits)
Additional IAS Coursework (20 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)

Total= 68 Credits

Law, Economics & Public Policy (LEPP) Courses:
Key: ** LEPP listing dependent on topic.

A. LEPP Core Courses
BISLEP 301 Law, Economics & Public Policy (5 credits)
BISLEP 302 Policy Analysis (5 credits)

B. Skills & Method Courses
BES 301 Science Methods & Practice

BIS 217 Introduction to Debate
BIS 312 Approaches to Social Research
BIS 315 Understanding Statistics
BIS 340 Approaches to Cultural Research
BIS 342 Geographic Information Systems
BIS 343 Geographic Visualization
BIS 352 Mapping Communities
BIS 410 Topics in Qualitative Inquiry
BIS 442 Advanced GIS Analysis and Applications
BIS 447 Topics in Quantitative Inquiry
BIS 483 Community Organizing
BIS 495 Internship
BIS 496 Community Service Project
BIS 497 Political Internship in State Government
BISSKL 302 Teambuilding (2 credits)
BISSKL 375 Academic Research & Writing Seminar (2 credits)
BISSKL 400 Policy Journal Editorial Board (2 credits)
B BUS 215 Introduction to Business Statistics
B BUS 402 Managing Work Teams

C. Policy Foundation Courses
BIS 320 Comparative Political Economies
BIS 338 Political Institutions & Processes
BIS 415 Public Policy & Law
BISGST 324 International Political Economy
BISSEB 304 Institutions & Social Change
BISSEB 359 Ethics & Society

D. Policy Problem Courses
BES 331 Estuarine Science and Management
BIS 219 The Politics of Sex Education
BIS 252 Politics of Science
BIS 255 Critical Diversity Studies
BIS 275 Social Problems
BIS 282 Globalization
BIS 284 International Relations
BIS 307 Environmental Justice
BIS 310 Women, Culture and Development
BIS 321 Human Rights and the Arts
BIS 327 History of US Labor Institutions
BIS/BEDUC 328 Diversity, Leadership, and Engagement
BIS 335 Human Rights in America
BIS 336 History of Mass Incarceration in the United States
BIS 353 Human Rights in Theory & Context
BIS 359 Principles & Controversies of Sustainability
BIS 374 Middle East Politics
BIS 380 Bioethics
BIS 384 Health, Medicine and Society
BIS 392 Water & Sustainability
BIS 394 Comparative Economic Development
BIS 403 WA DC Seminar on Human Rights
BIS 406 Urban Planning and Geography
BIS 419 Urban Politics and Policy
BIS 421 Technology Policy
BIS 441 Global Labor Markets
BIS 443 Education Policy & the Economy
BIS 446 Science, Expertise and Public Policy
BIS 448 Social Policy
BIS 458 Energy, Environment, and Society
BIS 459 Conservation & Sustainable Development
BIS 466 Human Rights & Resistance
BIS 468 Human Rights & Sustainability
BISAES 363 Conflict & Connections in the Americas
BISGWS 302 Histories and Movements of Gender and Sexuality
BST 200 Introduction to Climate Science
BST 445 Political Economy of Energy

Mathematical Thinking & Visualization (BA)

(Classes in this major are offered primarily during day time hours.)

Mathematical Thinking & Visualization (MTV) draws on mathematics, statistics, and visual studies to develop new practices and tools for discovering, analyzing, and representing data. The major allows students to link mathematical thinking – the ability to recognize mathematical forms in relation to real-world phenomena – and data and information visualization – the ability to communicate and think about data in visualized form across contexts. Students graduating with an MTV major may enter into the wide variety of fields focused on data analysis and visualization, including statistics, visual analytics, and geographic information systems and sciences.

Mathematical Thinking & Visualization (MTV) Prerequisites:
In addition to the general admission requirements, students must have completed the following

prerequisites to be considered for admission to the Bachelor of Arts in Mathematical Thinking and Visualization:

- one quarter of calculus
- one quarter of linear algebra

Mathematical Thinking & Visualization (MTV) Requirements
BIS 300 Interdisciplinary Inquiry (5 credits)
BIS 209 Engaging Visual and Media Arts (5 credits)
BIS 232 Visualizing Quantitative Data (5 credits)
BIS 315 Understanding Statistics (5 credits)
Mathematical Reasoning Courses (10 credits)
Visualization Practice and Methods Courses (10 credits)
Mathematical Reasoning Course OR Visualization Practice and Methods Course (5 credits)
Additional IAS Coursework (20 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)

TOTAL= 68 credits

Mathematical Thinking & Visualization (MTV) Courses:
A. MTV Core
BIS 209 Engaging Visual and Media Arts (5 credits)
BIS 232 Visualizing Quantitative Data (5 credits)
BIS 315 Understanding Statistics

B. Mathematical Reasoning
BIS 230 Mathematical Thinking for the Liberal Arts
BIS 302 Issues in Mathematics Across Cultures
BIS 329 Topics in Mathematics Across the Curriculum
BIS 350 The Concept of Number
BIS 447 Topics in Quantitative Inquiry
CSS 107 Introduction to Programming through Animated Storytelling
CSS 161 Fundamentals of Computing
CSS 162 Programming Methodology
STMATH 125 Calculus II
STMATH 126 Calculus III
STMATH 300 Foundations of Modern Mathematics
STMATH 310 Mathematical Game Theory
C. Visualization Practice and Methods
BES 440 Remote Sensing of the Environment
BIS 218 The Power of Maps
BIS 342 Geographic Information Systems
BIS 343 Geographic Visualization
BIS 344 Intermediate GIS
BIS 352 Mapping Communities
BIS 382 The Visual Art of Biology
BIS 442 Advanced GIS Analysis and Applications
BIS 434 Psychology and the Visual Arts
BISMCS 473 Visual Communication
B IMD 233 Fundamentals of Web Media Technology
B IMD 250 Intro to Interaction Design

Media & Communication Studies (BA)

(Classes in this major are offered primarily during day time hours.)

Media & Communication Studies (MCS) major prepares students to develop and hone skills as critical readers and practitioners that cross a range of disciplines and professional contexts. Students who graduate with an MCS major think critically about access, use, and control of communication and media on the local, national, and global level. The major combines hands-on production with a rich grounding in media and communication theory and history that focuses on power, difference, and injustice. MCS students develop the intellectual capacities and skills needed to use media and communication effectively and ethically.

MCS coursework integrates theory and practice through media production workshops, classroom seminars, and community-based research projects. The major prepares students for careers in the media industries, including digital media production, journalism, writing, and strategic communication, as well as community organizing and social justice work. The MCS major also provides a strong foundation for students pursuing advanced degrees in Communication, Media Studies, Cultural Studies, and Media Production, among many other fields.

There are no formal prerequisites for Media and Communication Studies. Useful preparation for this option includes formal and informal training in new media production. Students will need strong skills in critical and creative thinking, communications, and collaboration.

Media & Communication Studies (MCS) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
MCS Core Course (5 credits)
MCS Communication Practice & Media Production Courses (10 credits)
MCS Tier One Courses (15 credits)
MCS Tier One, Tier Two OR Communication Practice & Media Production Courses (10 credits)
Additional IAS Coursework (20 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)

TOTAL= 68 credits

Media & Communication Studies Courses:
A. MCS Core Course
BISMCS 333 Media and Communication Studies

B. Tier One Courses
BIS 205 Technologies of Expression
BIS 207 Shakespeare and Film
BIS 216 Introduction to Cultural Studies
BIS 232 Introduction to Data Visualization
BIS 233 Participatory Media Culture
BIS 235 Critical Media Literacy
BIS 236 Introduction to Interactive Media
BIS 238 Language, Identity, Culture and Power
BIS 261 Introduction to Film Studies
BIS 263 Literature into Film
BIS 264 Africa on Film
BIS 313 Issues in Media Studies
BIS 317 Language, Society, and Cultural Knowledge
BIS 324 Gender, Human Rights and Global Cinema
BIS 331 Journalism and Media History
BIS 347 History of American Documentary Films
BIS 464 Topics in Advanced Cinema Studies
BISAES 369 American Culture and Mass Media
BISCLA 318 Performance, Community, Identity and Everyday Life
BISMCS 471 Advanced Topics in Media and Communication Studies
BISMCS 473 Visual Communication
BISSTS 307 Science, Technology and Society
B EDUC 476 New Literacies for Digital Learning

C. Tier Two Courses
BIS 219 The Politics of Sex Ed
BIS 282 Globalization
BIS 319 Education and Society
BIS 342 Geographic Information Systems
BIS 382 The Visual Art of Biology
BISAES 305 Power, Dissent, and American Culture
BISIA 207 Introduction to Creative Writing
BISIA 311 Creative Writing: Prose
BISSEB 333 The Individual and Society
BEDUC 474 Global Englishes
BEDUC 522 Education and the American Dream

D. Communication Practice and Media Production Courses
BIS 204 Introduction to Journalism
BIS 217 Introduction to Debate
BIS 237 Public Speaking and Communication
BISIA 344 Video Art
BISIA 350 Photography and Digital Art
BISIA 450 Image and Imagination
BISMCS 240 Working with Video
BISMCS 260 Working with Audio
BISMCS 343 Media Production Workshop
BISMCS 472 Advanced Media Production Workshop
BISSKL 400 Policy Journal Editorial Board
BISIA 401 Literary & Arts Journal
BISMCS 402 Community Media Practice

Science, Technology & Society (BA)

How have the fields of science and technology evolved over time, and what does the future hold? How should societies manage those fields to achieve just and sustainable communities? The Science, Technology and Society (STS) prepares students to address these important questions through an integrated approach to science, technology, and their relationships to culture, history, and society.

STS students work with faculty members trained in disciplines ranging from biology and mathematics to political economy and philosophy. Housed in Interdisciplinary Arts and Sciences, the major enables students to develop their skills in scientific and technological research along with their capacities for critical, creative, and ethical reflection. Students leave the program with the capacity to make informed decisions about the responsible use of

science and technology -- as professionals and citizens.

Graduating STS students are prepared for careers with a wide variety of for-profit, not-for-profit, and governmental organizations that analyze, produce, and use scientific and technical knowledge. These careers include planning and administration, public and investor relations, and advocacy and communications, among other areas. STS students also pursue graduate and professional education in such fields as law, education, policy studies, and media and cultural studies.

Prerequisites:
Two quarters of a 100 or 200-level science sequence, which may be two courses from the same sequence or the first course from any two different sequences, as below:

BIS 250 and 251 (How Things Work) are recommended to satisfy this requirement.
Alternatively, students may take B BIO 180 and 200 (Introductory Biology) or their equivalents; B CHEM 143/144 and 153/154 (General Chemistry) or their equivalents; or B PHYS 114/117 and 115/118 (General Physics) or their equivalents; or B PHYS 121 (Mechanics) and B PHYS 122 (Electromagnetism & Oscillatory Motion) or their equivalents.
Other science courses may be accepted if they have a laboratory component and are designed for students expecting to major in the science field in which the sequence is offered.
BCUSP 123 (Functions, Models, and Quantitative Reasoning) or Pre-Calculus.

Science, Technology & Society (STS) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
BISSTS 307 (5 credits)
BIS 315 – min. 2.0 grade (5 credits)
BES 301 – min. 2.0 grade (5 credits)
BIS 312- min. 2.0 grade or BIS 340 min. 2.0 grade (5 credits)
Social and Cultural Studies of Science (SCSS) Courses (15 credits)
Science Practice Courses (10 credits)
BIS 499 Portfolio Capstone – min. 2.5 grade (3 credits)
Additional IAS Coursework (15 credits)
TOTAL= 68 credits

Science, Technology & Society (STS) Courses:
A. STS Core Course
BISSTS 307 Science, Technology and Society
B. STS Method Courses
BES 301 Science Methods and Practice
BIS 315 Understanding Statistics
BIS 312 Approaches to Social Research
BIS 340 Approaches to Cultural Research

C. Social and Cultural Studies of Science Courses
Courses which apply the theories and/or methods of one or more disciplines in the social sciences and humanities to the study of science, technology, engineering, mathematics, or medicine, or which explore how artistic practice can be informed by scientific concepts of technological forms. Such courses include:

BIS 218 The Power of Maps
BIS 302 Issues in Mathematics Across Cultures
BIS 307 Environmental Justice
BIS 329 Topics in Mathematics Across the Curriculum
BIS 345 American Environmental Thought
BIS 346 Topics in Environmental Policy
BIS 350 The Concept of Number
BIS 355 History of Science and Technology
BIS 356 Ethics and the Environment
BIS 380 Bioethics
BIS 382 The Visual Art of Biology
BIS 384 Health, Medicine and Society
BIS 391 Environmental History of the Pacific Northwest Bioregion
BIS 411 Biotechnology and Society
BIS 421 Technology Policy
BIS 446 Science, Expertise and Public Policy
BIS 458 Energy, the Environment and Society
BIS 459 Conservation and Sustainable Development
CSS 211 Computers and Society
CSS 411 Computing Technology and Public Policy
D. Science Practice
Courses which give students the opportunity to experience the processes through which scientific knowledge and technology innovations are made by

involving them in science, engineering, mathematics, or medical research, or by asking them to apply scientific theory or methods to understanding and solving real-world problems. Such courses include:

BES 303 Environmental Monitory Practicum
BES 311 Environmental Chemistry
BES 312 Ecology
BES 316 Ecological Methods
BES 321 Geomorphology
BES 331 Estuarine Science and Management
BES 341 Natural Hazards and Human Disasters
BES 362 Introduction to Restoration Ecology
BES 415 Advanced Environmental Measurements Lab
BES 439 Computer Modeling and Visualization in Environmental Science
BES 462 Restoration Ecology Capstone: Introduction
BES 463 Restoration Ecology Capstone: Proposal and Plan
BES 464 Restoration Ecology Capstone: Field Site Restoration
BES 485 Conservation Biology
BES 486 Watershed Ecology and Management
BES 487 Field Laboratory in Wildland Soils and Plants
BES 489 Pacific Northwest Ecosystems
BIS 232 Introduction to Data Visualization
BIS 240 Introduction to Sustainable Practices
BIS 241 Nature in the Northwest
BIS 242 Introduction to Environmental Issues
BIS 244 Wetlands Discovery
BIS 250 How Things Work: Motion and Mechanics
BIS 251 How Things Work: Electricity and Invention
BIS 306 Marine Diversity and Conservation
BIS 342 Geographic Information System
BIS 343 Geographic Visualization
BIS 358 Issues in Environmental Science
BIS 381 The History of Life
BIS 392 Water and Sustainability
BIS 395 Environmental Change in Washington State
BIS 442 Advanced GIS Analysis and Applications
BIS 447 Topics in Quantitative Inquiry
BIS 459 Conservation and Sustainable Development
B BIO/BISSTS 231 Genes, Genomes and Heredity
B BIO/BISSTS 232 Embryos, Genes and Reproductive Technology
B CLIM 320 Impacts of Climate Change
BST 200 Introduction to Climate Sciences
BST 446 Sustainable Energy

Society, Ethics & Human Behavior (BA)

How do social institutions and practices shape human experience? How do individuals contribute to social stability and change?

SEB addresses these questions through a critical examination of the perspectives and tools used to understand human behavior, social institutions, and social policies. SEB combines an exploration of the ethical dimensions of individual and social action with analyses across multiple disciplines including sociology, psychology, media and cultural studies, anthropology, ethics, and political philosophy. The SEB faculty is committed to providing students with opportunities to engage in empirical research and project-based learning experiences in and beyond the classroom.

Graduating SEB students are ideally prepared to pursue professional careers or advanced study in a wide variety of fields, such as social work, education, public policy, law, media and cultural studies, and human resources. SEB also educates students to assume more active leadership roles within their communities, families, and workplaces.

While there are no official requirements, students choosing this major will find it helpful to have completed college coursework in psychology, sociology, statistics, and philosophy.

Society, Ethics & Human Behavior (SEB) Requirements:
BIS 300 Interdisciplinary Inquiry (5 credits)
SEB Core (5 credits)
BIS 315, BIS 312 or BIS 410 – min. 2.0 grade (5 credits)
SEB Courses (30 credits)
Portfolio Capstone – min. 2.5 grade (3 credits)
Additional IAS Coursework (20 credits)
TOTAL= 68 credits

Society, Ethics & Human Behavior (SEB) Courses:
Key: **SEB listing dependent on topic.

A. SEB Core Courses
BISSEB 304 Institutions and Social Change
BISSEB 331 The Family in U.S. Society
BISSEB 333 The Individual and Society
BISSEB 359 Ethics and Society

B. Methods and Modes of Inquiry
BIS 312 Approaches to Social Research
BIS 315 Understanding Statistics
BIS 340 Approaches to Cultural Research
BIS 343 Geographic Visualization
BIS 352 Mapping Communities
BIS 410 Topics in Qualitative Inquiry
B BUS 215 Introduction to Business Statistics

C. Individual Behavior
BIS 202 Critical Reasoning
BIS 220 Developmental Psychology
BIS 225 Social Psychology
BIS 270 Abnormal Psychology
BIS 337 Risk and Resilience
BIS 348 Cultural Psychology
BIS 349 Personality Psychology
BIS 364 Realities and Representations of Adolescent Development
BIS 422 Clinical Psychology
BIS 434 Psychology and the Visual Arts
BIS 437 Narrative Psychology
BIS 438 Prevention and Promotion
BIS 449 **Advanced Topics in Psychology
BIS 496 Community Service Project
BISCP 343 Community Psychology
BISCP 489 Projects in Community Psychology

D. Institutions
BIS 226 Foundations of U.S. Social Service
BIS 282 Globalization
BIS 327 History of U.S. Labor Institutions
BIS 330 Democratic Capitalism in the United States
BIS 338 Political Institutions and Processes
BIS 433 Gender, Work and Family
BIS 436 Comparative Family Systems
BIS 441 Global Labor Markets

E. Social Policy and Social Justice
BIS 218 Power of Maps
BIS 219 The Politics of Sex Education
BIS 224 Introduction to Feminist Studies
BIS 240 Sustainable Practices
BIS 243 Introduction to Environmental Issues
BIS/B EDUC 255 Critical Diversity Studies
BIS 275 Social Problems
BIS 307 Environmental Justice
BIS 321 Human Rights and the Arts
BIS 325 Disability and Human Rights
BIS/B EDUC 328 Diversity, Leadership and Engagement
BIS 335 Human Rights in America
BIS 353 Human Rights in Theory and Practice
BIS 359 Principles & Controversies of Sustainability
BIS 394 Comparative Economic Development
BIS 403 Washington DC Seminar on Human Rights
BIS 405 Environmental Education
BIS 406 Urban Planning and Geography
BIS 415 Public Policy and the Law
BIS 419 Urban Politics and Policy
BIS 420 Colonizing History in Sub-Saharan Africa
BIS 443 Educational Policy and the American Economy
BIS 445 Meanings and Realities of Inequality
BIS 448 Social Policy
BIS 458 Energy, the Environment and Society
BIS 466 Human Rights and Resistance
BIS 468 Human Rights and Sustainable Development
BIS 497 Political Internship in State Government (5 credits max)
BISLEP 301 Law, Economics & Public Policy
BISLEP 302 Policy Analysis
BISSTS 231 Genes, Genome, and Heredity
BISSTS 232 Embryos, Genes, and Reproductive Technology
BISSTS 307 Science, Technology, and Society
BEDUC 220 Education & Society (3 credits)
BEDUC 475 Global Perspectives on Diversity and Citizenship Education
BEDUC 493 Environmental Education

F. Culture and Society
BIS 205 Technologies of Expression
BIS 216 Introduction to Cultural Studies
BIS 217 Introduction to Debate
BIS 221 Gender and Sexuality
BIS 223 Introduction to Narrative Ethnography
BIS 233 Participatory Media Culture

BIS 238 Language, Identity, Culture and Power
BIS 256 Introduction to African American Studies
BIS 257 Introduction to Asian American Studies
BIS 258 Introduction to U.S. Latina/Latino Studies
BIS 265 Introduction to Comparative Ethnic Studies
BIS 310 Women, Culture & Development
BIS 317 Language, Society and Cultural Knowledge
BIS 368 Women's Lives in Context
BIS 372 Representation, Colonialism, and the Tropical World
BIS 374 Middle East Politics
BIS 384 Health, Medicine & Society
BIS 418 Masculinity, Homoeroticism and Queer Theory in America
BIS 431 Issues in Sexual Politics and Cultures
BIS 463 U.S. Women's History
BIS 465 Performance, History, and Memory
BIS 470 Art, Politics and Social Change
BIS 471 Women in Art
BISAES 305 Power, Dissent, and American Culture
BISAES 364 Public Memory and Dissent in American Culture
BISAES 367 Exploring American Culture: Race, Ethnicity and Immigration
BISAES 368 Sex, Love, Romance
BISAES 369 American Culture and Mass Media
BISCLA 318 Performance, Identity, Community and Everyday Life
BISGWS 301 Critical Gender & Sexuality Studies
BISGWS 302 Gender, Women, and Sexuality Studies
BISGWS 303 Approaches to Feminist Inquiry
BISMCS 333 Media and Communication Studies
BEDUC 456 Adolescents in School and Society
BEDUC 461 Education and Gender Inequality
BEDUC 475 Global Perspectives on diversity and Citizenship Education (3 credits)

G. Ethics, Philosophy and Social Theory
BIS 260 Introduction to World Religions
BIS 281 Contemporary Political Ideas and Ideologies
BIS 345 American Environmental Thought
BIS 356 Ethics and the Environment
BIS 357 Native American Religious and Philosophical Thought
BIS 359 Principles & Controversies of Sustainability
BIS 380 Bioethics

H. Area Studies
BIS 480 **Study Abroad

Minor Requirements:

Minor in Creative Writing

The Minor in Creative Writing enables students to explore and engage diverse creative writing practices and to develop artistic, critical and conceptual competence in an interdisciplinary context.

Students pursuing the Creative Writing minor must complete 25 credits in the following areas:

IA Core (5 credits)

- BISIA 319 Interdisciplinary Arts

20 Credits of BISIA courses in the area of Creative Writing Coursework

Students are required to take at least 15 credits at the 300 or 400 level

- BISIA 207 Introduction to Creative Writing: Words, Stories, Dialogues
- BISIA 310 Creative Writing: Poetry
- BISIA 311 Creative Writing: Prose
- BISIA 410: Advanced Creative Writing Workshop
- Selected Interdisciplinary Techniques & Workshop Courses Depending on Topic

No more than 10 credits from the Creative Writing Minor can be applied to a student's major requirements.

Minor in Diversity Studies

The Minor in Diversity Studies is an option for students who want to explore key concepts related to power, identity, and difference, and to understand how historical and structural relations of power and difference shape social relations.

Co-administered between the School of Interdisciplinary Arts and Science and the School of Educational Studies at UW Bothell, the minor integrates theoretical and practical approaches to the study of diversity. It is designed to enable

students to transform the worlds they live in now and will move into after graduation.

Students pursuing the Minor in Diversity Studies must complete 25 credits in the following areas:

- 5 credits: BIS/BEDUC 255 Critical Diversity Studies
- 5 credits: BIS/BEDUC 328 Diversity, Leadership, and Engagement*
- 5 credits: Course satisfying the University of Washington's Diversity (DIV) Requirement
- 5 credits: Upper Division Diversity Studies Minor Elective
- 5 credits: Diversity Studies Final Project

Note: Classes in this minor are offered primarily during the day-time hours.

**Students receiving fewer than 5 credits in BIS/BEDUC 328 may take additional Upper Division Diversity Studies Minor Elective courses to reach the minimum 25 credits required for the minor.*

Upper Division (300-400 level) Diversity Studies Minor Electives

BHS 302 Social Dimensions of Health
B NURS 407 Cultural and Social Issues in Healthcare
BEDUC 330 Race, Culture, and Identity in the Classroom
BECUC 461 Educational Implications Gender Inequality
B EDUC 474 Global Englishes
BEDUC 475 Global Perspectives on Diversity and Citizenship Education (3 credits)
BEDUC 522 Education and the American Dream (3 credits)
BIS 310 Women, Culture, and Development
BIS 325 Disability and Human Rights
BIS 335 Human Rights in America
BIS 368 Women's Lives in Context
BIS 379 American Ethnic Literatures
BIS 433 Gender, Work, and Family
BIS 445 Meanings and Realities of Inequality
BIS 463 U.S. Women's History
BISAES 305 Power, Dissent, and American Culture
BISAES 367 Race, Ethnicity, and Immigration
BISAES 368 Sex, Love, Romance
BISGWS 302 History and Movements in Gender and Sexuality

No more than 10 credits from the Diversity Studies Minor can be applied to a student's major requirements.

Minor in Ecological Restoration

The minor in ecological restoration seeks to prepare students to address the complex relationships of human communities and ecological sustainability. The minor is a tri-campus initiative (UW Bothell, UW Seattle, and UW Tacoma). Students may, but are not required to, take courses from more than one campus in order to earn the minor.

Students pursuing the Ecological Restoration minor must complete 25 credits in the following areas:
1. Introductory course in restoration ecology (5 credits)
2. UW-REN capstone course sequence in ecological restoration (10 credits)
3. Restoration related courses (10 credits)

Introduction to Restoration Ecology (5 credits)
This 5-credit course provides a foundation in the principles and history of ecological restoration. It covers a broad range of topics from how restoration is done, its scientific bases, regulations, social context, etc.

UW-REN Capstone in Ecological Restoration (10 credits)
The restoration ecology capstone is a 10-credit three-quarter sequence (fall – winter – spring) taught by faculty from all UW campuses. Students from across departments at all three campuses are assigned to interdisciplinary teams of students from diverse academic fields. These teams work with a community partner to undertake ecological restoration projects in the surrounding area that are important, but for which financial or technical resources are limited. Students learn how to work in a multidisciplinary team environment while accomplishing a restoration project that connects the academic principles they have learned to hands-on practice with a real-life client. This course sequence

is offered at all three UW campuses each academic year.

Restoration Related Courses (10 Credits)
This requirement allows students to develop more specific expertise in ecological restoration, often within their major field of study. Courses are approved that have substantial explicit restoration content or those (above introductory-level courses) that cover principles or provide applications valuable in undertaking restoration. Course approval is done by the UW-REN faculty academic steering committee. Special topics courses offered occasionally are approved on a case-by-case basis by the faculty directors

NOTES: Students must complete at least 15 credits of the minor at their home campus. Also, no more than 10 credits from the Ecological Restoration Minor can be applied to a student's major requirements. Students pursuing the BS in Science are not eligible to complete the Ecological Restoration Minor.

For a list of courses which satisfy the requirements listed above, please see our website: http://www.uwb.edu/ias/minors/erminor.

Minor in Gender, Women & Sexuality Studies

The Minor in Gender, Women & Sexuality Studies is a perfect complement to majors across any discipline: from American & Ethnic Studies, to Biology, to Educational Studies. The minor positions students to examine social, political, and cultural realities shaped by gender, sexuality, and power. GWSS approaches topics from transnational and intersectional perspectives, enabling students to analyze and address issues of gender, sexuality, and social difference at personal, historical, institutional, and structural levels.

Note: Students pursuing the GWSS Major will not be able to pursue the GWSS minor. Students pursuing a different major offered by IAS will be able to count up to 10 credits toward their IAS major and the GWSS minor.

Core Course - 5 Credits
BISGWS 301 Critical Gender & Sexuality Studies (5 credits)

GWSS Coursework - 20 Credits
(*at least 15 credits of course work must be at the 300 or 400 level):
BIS 219 The Politics of Sex Education
BIS 221 Gender and Sexuality
BIS 224 Introduction to Feminist Studies
BIS 310 Women, Culture, and Development
BIS 324 Gender, Human Rights and Global Cinema
BIS 368 Women's Lives in Context
BIS 369 Women Across Cultures
BIS 387 Women and American Literature
BIS 418 Masculinity, Homoeroticism, and Queer Theory in America
BIS 431 Issues in Sexual Politics and Cultures
BIS 433 Gender, Work, and Family
BIS 436 Comparative Family Systems
BIS 455 Literature and Sexuality
BIS 463 U.S. Women's History
BIS 471 Women in Art
BIS 486 Studies in Women and Literature
BISAES 368 Sex, Love, Romance
BISGWS 302 History and Movements of Gender and Sexuality
BISGWS 303 Approaches to Feminist Inquiry
BISSEB 331 The Family in U.S. Society

Minor in Human Rights

The Human Rights minor is an option for students who are interested in the rapidly emerging field of human rights. The minor is a tri-campus initiative (UW Bothell, UW Seattle and UW Tacoma). Students may, but are not required to, take courses from more than one campus in order to earn the minor.

Students must complete the following requirements for a minor in Human Rights (25 credits):
Human Rights Core (Tier One, 10 credits)
Human Rights Broad Context (Tier Two, 5 credits)
Human Rights Core or Broad Context (Tier One or Tier Two, 10 credits)

Human Rights Core (Tier One 10 Credits)

Courses concerned with the study of "human rights" (i.e. as defined in the Universal Declaration of Human Rights) as a core concept.
Human Rights Broad Context (Tier Two, 5 credits)
Courses concerned with human rights in a broad context, e.g. poverty, race/ethnicity, gender.

A complete list of Human Rights Core (Tier One) and Human Rights Broad Context (Tier Two) courses offered at UW Bothell can be found on our website: http://www.uwb.edu/ias/minors/hrminor.
In addition to the courses listed above, students must complete the equivalent of 3 credits of a practical experience in a human rights-related area. This requirement may be met through an internship, practicum, yearlong participation in the student human rights club, Human Equality and Rights Everywhere (HERE), international study abroad program, the Washington D.C. Seminar on Human Rights or a demonstrated equivalent.

Minor in Policy Studies

The Policy Studies minor is designed to provide students with the analytical foundations they will need to understand policy formation, implementation, and evaluation.

Students must complete the following requirements for a minor in Policy Studies (30 credits):

Common Core (20 credits)
Microeconomics (BIS 200/BBUS 220 or equivalent)
BISLEP 302 Policy Analysis OR BISGST
324 International Political Economy
BISLEP 301 Law, Economics and Public Policy OR BIS
338w Political Institutions and Processes
Statistics (BBUS 215, BIS 315, STAT 220, 311 or equivalent)

Methods (5 credits)
Take one course from the following list:
BIS 312 Approaches to Social Research
BES 301 Science Methods and Practice
BHS 300 Principles of Health Research

Elective (5 credits)
Choose from the following list of 400-level policy-oriented courses:
BIS 403 Washington DC Seminar on Human Rights
BIS 406 Urban Planning
BIS 414 Topics in Human Rights
BIS 415 Public Policy and law
BIS 419 Urban Politics and Policy
BIS 421 Technology Policy
BIS 443 Educational Policy and the American Economy
BIS 446 Science, Expertise and Public Policy
BIS 448 Social Policy
BIS 458 Energy, Environment and Society
BIS 459 Conservation and Sustainable Development
BIS 466 Human Rights and Resistance
BIS 468 Human Rights and Sustainable Development
BIS 491 Topics in Policy Studies
BIS 497 Political Internship in State Government
BISLEP 497 Topics in Law, Economics and Public Policy

Other appropriate policy area courses by approval including BPOLST 492 (Topics in Policy Research).
NOTE: Students pursuing Interdisciplinary Studies: Law, Economics and Public Policy are not eligible to complete the minor in Policy Studies.

Minor in Visual and Media Arts

The Minor in Visual and Media Arts enables students to explore and engage diverse visual and media arts practices and to develop artistic, critical and conceptual competence in an interdisciplinary context.

Students pursuing the Visual and Media Arts minor must complete 25 credits in the following areas:

IA Core (5 credits)
- BISIA 319 Interdisciplinary Arts

20 credits of BISIA courses in the area of Visual and Media Arts Coursework

Students are required to take at least 15 credits at the 300 or 400 level
- BISIA 240 Visual and Media Arts Techniques
- BISIA 250 Photography as Art
- BISIA 340 Visual and Media Arts Workshop

- BISIA 344 Video Art
- BISIA 350 Photography and Digital Art
- BISIA 440 Advanced Visual and Media Arts Workshop
- BISIA 450 Image and Imagination
- Selected Interdisciplinary Techniques & Workshop Courses Depending on Topic

No more than 10 credits from the Creative Writing Minor can be applied to a student's major requirements.

School of Nursing and Health Studies

Bachelor of Science in Nursing (BS)

The University of Washington Bothell Bachelor of Science in Nursing (BSN) degree is accredited as part of the University of Washington School Of Nursing and awards a University of Washington degree. The degree program is combined with the UW School of Nursing's acclaimed professional program with the University of Washington Bothell's well-rounded arts and sciences curriculum, building a foundation of knowledge in nursing science, humanities and social sciences, and related professional course work. Critical thinking, decision making, and oral and written communication skills are emphasized.

The School of Nursing and Health Studies offers two educational pathways to earn a Bachelor of Science in Nursing from the University of Washington Bothell; The First-Year Entry RN-to-BSN and the RN-to-BSN degree completion program.

RN-to-BSN Degree Program

Intended for students holding an RN, and an Associate Degree in Nursing or Nursing Diploma from a regionally accredited institution.

The RN-to-BSN degree completion program values the professional experience of Registered Nurses, allows for students to apply their learning to their professional practice, allows students to explore their own interests, and prepares students for graduate level study. The curriculum meets the American Association of Colleges of Nursing's Essentials of Baccalaureate Education for Professional Nursing Practice and is accredited by the Commission on Collegiate Nursing Education.

The School of Nursing and Health Studies at UW Bothell is committed to providing access to education through offering flexible scheduling options. It is based on an understanding that the student is a practicing nurse who must balance professional and personal responsibilities with educational pursuits.

The UW Bothell School of Nursing and Health Studies offers RN-to-BSN students:

- A one-day-per-week schedule,
- A 4 quarter or an 8-9 quarter completion plan,
- Admits multiple quarters and locations: Summer Bothell (Hybrid); Fall Bothell (Hybrid);
  Fall Everett; Fall Seattle; Winter Everett (Hybrid)

Admission Requirements

- UW Bothell general transfer admissions requirements: Intermediate Algebra, World Language or English Proficiency as deemed required by the Office of Admissions.
- Associate degree in Nursing or diploma in nursing
- Active unencumbered Registered Nurse licensure in the State of Washington
  - Applicants pending passage of the NCLEX are conditionally admitted for two quarters.
- A minimum of 90 quarter credits
- English Composition: 5 credits
- Visual, Literary, and Performing Arts: 10 credits
- Statistics: 4 to 5 credits
- Microbiology: 3 to 5 credits
- Anatomy & Physiology with a Lab: 10 credits

- A minimum grade of 2.0 or higher in all BSN prerequisite coursework outlined above
- National and State Criminal Background Check with acceptable results

Program Credit Structure
Summary of Credits
Transfer Credit - 90
NCLEX-RN Exam Completion Credits - 45
Upper-Division Nursing Courses - 35
Upper Division Non-Nursing UWB Electives - 10
Total – 180

Graduation Requirements
180 credits
90 credits must be upper division (300-400 level)
Completion of last 45 credits at UWB (see below)
Cumulative grade-point average of 2.0 or higher
Minimum 2.0 grade in all BSN degree program coursework

First Year Entry RN-to-BSN Degree Program
Intended for first year students with no college credits post high school.

The First Year Entry RN-to-BSN is a professional integrated degree program that provides direct entry for first year students into the nursing major in partnership with the Everett Community College Nursing Program. It is designed for high school graduates and those holding a high school diploma with no post high school college credits (senior summer quarter credits after graduation included). The degree program combines associate and baccalaureate degree education, which allows students the opportunity to pursue a Registered Nursing license as part of the BSN rather than after the completion of the degree. Students study at two college campuses graduating from the degree program with an RN License, an Associate in Nursing Degree from EvCC and a Bachelor of Science Degree from UW Bothell.

First Year Entry RN-to-BSN Admission Requirements

1. Freshman class standing as a domestic student
2. Completion of UW Bothell First-Year (freshman) admission requirements
3. Completion of the mathematics proficiency requirement
4. University personal statement
5. Nursing goal statement
6. Journal of activities and accomplishments
7. Two recommendation forms

First Year Entry RN to BSN Degree Program Requirements

Maintain satisfactory academic and testing progress as follows:

1. Cumulative GPA of 2.85 first five quarters at UWB (program coursework).
2. Minimum grade of 2.9 in each of the following biology courses: BBIO 240, 241,242 and 260.
3. Minimum grade of 3.0 in each of the following composition courses BWRIT 134 and BWRIT 135.
4. Minimum grade of 2.0 in each UW Bothell course.
5. 3.0 GPA in each quarter of the EvCC Nursing Program.
6. Associate Degree in Nursing from EvCC Nursing Program.
7. Passage of the NLN PAX examination with the minimum percentage required by partner institution.
8. Pass the Washington State RN-NCLEX no later than two quarter after completing of the Associate Degree in Nursing.
9. Completion of UW Bothell RN to BSN degree requirements upon re-entry senior year.

Non-academic Requirements:

1. Completion of the Health and Safety

Requirements (immunizations, insurance, and healthcare related training).

Program Credit Structure
Summary of Credits
Nursing Prerequisites and General Education Courses-73 credits
Transfer Credits-38 credits
NCLEX-RN Exam- 45 credits
Upper Division Non-Nursing UWB Electives - 10
Upper-Division RN to BSN courses- 35 credits
Total – 201 credits

UW Bothell Graduation Requirements
Graduation Requirements
180 credits
90 credits must be upper division (300-400 level)
Completion of last 45 credits at UWB
Cumulative grade-point of 2.0 or higher
Minimum 2.0 grade in all BSN degree program coursework

Bachelor of Arts in Health Studies (BA)

In the Health Studies program, students develop and apply a range of skills for public health practice. Students explore the social and biological predictors of health; conduct policy analyses; use health education and community engagement strategies; apply social justice critiques; understand global health perspectives, and evaluate health related research. The student will develop critical thinking and encourage knowledge analysis and synthesis while building technical and analytical skills to address challenges in protecting the health of communities from local to global.

Given the urgent need for a larger and more diversified public health workforce, students graduating from this program will be well-positioned for careers that help ensure all people receive excellent health services.

The Health Studies program offers:

- A combination of hands-on learning, community engagement, and real-time, problem-based learning as ways to explore the current challenges, debates, and interventions in population health
- An opportunity for students to explore individual interests through the selection of approved elective coursework
- Preparation for an entry-level position in the public health field and/or graduate education

Admission Requirements
Before applying, applicants must complete a minimum of 30-quarter credits including:

- Two college English composition courses (10 credits) with a minimum grade of 2.0 in each course
- A course that satisfies Quantitative and Symbolic Reasoning (QSR)
- A minimum of 10 credits in each of the Areas of Knowledge (VLPA, I&S, NW)
- It is preferred that students complete a 5 credit statistics class (Any introductory-level statistics course is acceptable)

Transfer applicants must also have satisfied:

- All university admission requirements for transfer or international applicants.
  - Transfer: http://www.uwb.edu/admissions/transfer/transfer-req
  - International: www.uwb.edu/admissions/international/intladm/intltransadv
- English Proficiency Requirement: All applicants for whom English is a non-native language may have to provide proof of English proficiency. (www.uwb.edu/admissions/engprof)

Program Structure
Summary of Credits

Health Studies Core Courses – 32 credits

- Introduction to Public Health – BHS 201
- Principles of Health Research – BHS 300

- Social Dimensions of Health – BHS 302
- Introduction to Healthcare Policy and Systems – BHS 305
- Pathways to Health Studies – BHS 310
- Introduction to Epidemiology – BHS 403
- Fieldwork in Health – BHS 496

Approved Health Studies Electives with at least ten credits in B HLTH courses – 40 credits
Statistics – 5 credits
Upper Division UW Elective Courses– 15 credits

Graduation Requirements

English Composition – 5 credits (a grade of 2.0 or higher is required)
Writing Across the Curriculum – 10 credits
Quantitative and Symbolic Reasoning – 5 credits
Diversity – 3 credits
Visual, Literary, and Performing Arts – 15 credits
Individuals and Societies – 15 credits
Natural World – 15 credits
Completion of all admission and program requirements, as outlined above
180 or more total credits.

Minor in Health Studies

The Minor in Health Studies will prepare students to identify the various factors that influence health and wellness at individual, community and global levels.

Minor Requirements
Students are required to complete a total of 30 credits of coursework:

Required Health Studies core courses: 10 credits

- BHS 201 Introduction to Public Health (5 credits)
- BHS 302 Social Dimensions of Health (5 credits)

One of the following research courses for 5 credits:

- BHS 300 Principles of Health Research (5 credits)
- BIS 312 Approaches to Social Research (5 credits)
- BES 301 Science Methods and Practice (5 credits)
- BNURS 403 Evidence Based Practice and Nursing Inquiry (5 credits)

15 Credits of approved Health Studies electives with at least five credits in B HLTH courses

Minor in Health Education & Promotion

This minor will prepare students to improve and promote health locally and globally through effective community based, culturally tailored health education, communication, leadership and advocacy. This minor prepares students to take the CHES exam through the National Coalition for Health Education & Credentialing (NCHEC), allowing them to be nationally certified Health Educators.

Prerequisite for Declaring the Minor
BHS 201 – Introduction to Public Health (5 credits)

Minor Requirements
Students are required to complete a total of 35 credits of coursework:
BHS 300: Principles of Health Research OR approved introductory research course (5 credits)
B HLTH 435: Foundations & Principles of Health Education & Communication (5 credits)
B HLTH 436: Introduction to Management & Leadership for Health Professionals (5 credits)
B HLTH 437: Program Planning and Strategies for Health Promotion (5 credits)
B HLTH 438: Program Evaluation for Health Education & Promotion (5 credits)
B HLTH 439: Health Policy and Advocacy (5 credits)
Upper Division B HLTH elective (5 credits)

Minor in Global Health

Global Health is a diverse field of research and practice that aims to improve population health and work towards equity for all people. The minor in Global Health will introduce students to a range of career possibilities related to global health through critically-engaged and multi-disciplinary coursework and experiences. The minor invites students with diverse career plans and majors to consider how their training can be applied to global health challenges and opportunities. Through the minor, students will: learn to critically analyze global health trends;

understand programs, policies, and social movements that aim to improve health around the world; build a foundation for lifelong learning about cultural humility, social justice, equity, and inclusion in relation to health; and apply knowledge to practice by engaging in experiential, practice-oriented, and problem-based learning. The minor is designed to develop skills in global health practice that can be applied in pursuing careers or further training related to global health.

Minor Requirements
Students choosing to minor in Global Health will be required to complete a total of 25 credits of coursework.

B HLTH 201 Introduction to Global Health (5 credits)
B HLTH 301 Global Health Practice: Systems, Places, and People (5 credits)
B HLTH 423 Global Health: Critical Perspectives (5 credits)

Students must also complete at least 10 credits from an approved list of electives. At least 5 credits from two of the three following categories must be completed: 1. Core topics in global health; 2. Populations, regions, & issues; 3. Skills & applications.

Students may not have more than 10 credits of overlap between this minor and their chosen major.

School of Science, Technology, Engineering and Mathematics

Division of Biological Sciences

Bachelor of Science in Biology (BS)

The Bachelor of Science in Biology offers a challenging, integrative course of study in which students study biology in both breadth and depth. Students take required courses across the biological sciences, including Genetics, Ecology, and Evolution. Electives –from Microbiology and Cell Biology to Anatomy and Physiology and Conservation Biology – allow students to explore their interests in more depth. The Biology program emphasizes undergraduate research, development of strong communication skills, and an awareness of the impact of Biology on society.

The Bachelor of Science in Biology provides an excellent foundation for students to pursue careers or graduate study in biology, biology education, ecology, biotechnology, pharmaceuticals, medicine, dentistry, and health.

Admission Requirements
The following classes must be completed prior to admission. A **2.0 minimum grade is required** in each of the Introductory Biology courses:

- B CHEM 143/144 General Chemistry I w/ Lab
- B CHEM 153/154 General Chemistry II w/ Lab
- B CHEM 163/164 General Chemistry III w/ Lab
- B BIO 180 Introductory Biology I
- B BIO 200 Introductory Biology II
- B BIO 220 Introductory Biology III

Please see http://admit.washington.edu/EquivalencyGuide for Washington State Community College course transfer equivalencies.

Program Structure
Students entering the Biology major Autumn Quarter 2015 and thereafter follow the curriculum outlined below.
Required Courses — Complete all of the following:

- B CHEM 143/144 General Chemistry I w/ Lab
- B CHEM 153/154 General Chemistry II w/ Lab
- B CHEM 163/164 General Chemistry III w/ Lab
- B BIO 180 Introductory Biology I
- B BIO 200 Introductory Biology II
- B BIO 220 Introductory Biology III
- B BIO 360 Introduction to Genetics
- B BIO 466 Evolution

Mathematics — Choose one course:

- STMATH 124 Calculus I

- B MATH 144 Calculus for the Life and Social Sciences

Statistics — Choose one course:
- BHS 215 Statistics for Health Sciences
- STMATH 341 Statistical Inference

Physics — Choose one set of courses:
- B PHYS 114/117 General Physics I w/ Lab **and** B PHYS 115/117 General Physics II w/ Lab
- B PHYS 121 Mechanics **and** B PHYS 122 Electromagnetism

Ecology — Choose one course:
- BES 312 Ecology
- B BIO 471 Plant Ecology

Cell Biology — Choose one course:
- B BIO 370 Microbiology I
- B BIO 372 Stem Cells
- B BIO 380 Cell Biology

Physiology — Choose one course:
- B BIO 351 Principles of Anatomy and Physiology I
- B BIO 352 Principles of Anatomy and Physiology II

Investigative Biology — Choose one course:
- B BIO 495 Investigative Biology
- Approved Undergraduate Research (B BIO 499)
- Approved Non-Credit Internship / Other Experience

Biology and Society — Choose one course:
- B BIO 231 Genes, Genomes and Heredity
- B BIO 232 Embryos, Genes and Reproductive Technology
- B BIO 233 Cancer: Biology, Risk, and Treatment
- B BIO 310 Brain and Behavior
- B BIO 335 Salmon and Society
- BES 331 Estuarine Science and Management
- BES 489 Pacific Northwest Ecosystems
- BIS 240 Sustainable Practices
- BIS 241 Nature and the Northwest
- BIS 243 Introduction to Environmental Issues
- BIS 307 Environmental Justice
- BIS 356 Ethics and the Environment
- BIS 380 Bioethics
- BIS 391 Environmental History of the Pacific Northwest Bioregion
- BIS 405/B EDUC 493 Environmental Education
- BIS 411 Biotechnology and Society
- BIS 459 Conservation and Sustainable Development
- BISSTS 307 Science, Technology, and Society
- Approved Special Topics Courses (B BIO 293/393, BES 397/497, BISSTS 397/497)

Biology Electives — Choose 20 credits of coursework from at least two different categories. Each elective course is 5 credits unless otherwise noted.

Category A – Ecology/Diversity/Evolution
- B BIO 330 Marine Biology
- B BIO 335 Salmon and Society
- B BIO 370 Microbiology I
- B BIO 383 Bioinformatics
- B BIO 385 Animal Behavior
- B BIO 471 Plant Ecology
- BES 312 Ecology
- BES 316 Ecological Methods
- BES 362 Restoration Ecology
- BES 439 Computer Modeling and Visualization in Environmental Sciences
- BES 462, 463, 464 Restoration Ecology Capstone (must take all three; 10 credits total)
- BES 485 Conservation Biology
- BES 488 Wetland Ecology
- BES 489 Pacific Northwest Ecosystems
- BES 490 Pacific Northwest Plants in Restoration and Conservation
- BIS 306 Marine Diversity and Conservation
- BIS 381 The History of Life

Category B – Cell/Molecular Biology
- B BIO 340 Computational Biology
- B BIO 364 Biochemistry I

- B BIO 365 Biochemistry II
- B BIO 366 Biochemistry Lab (3 credits)
- B BIO 370 Microbiology I
- B BIO 372 Stem Cells
- B BIO 375 Molecular Biology
- B BIO 380 Cell Biology
- B BIO 383 Bioinformatics
- B BIO 460 Developmental Biology
- B BIO 470 Microbiology II

Category C – Physiology/Neurobiology

- B BIO 310 Brain and Behavior
- B BIO 351 Principles of Anatomy and Physiology I
- B BIO 352 Principles of Anatomy and Physiology II
- B BIO 355 Behavioral Endocrinology
- B BIO 385 Animal Behavior
- B BIO 394 Special Topics in Neuroscience
- B BIO 480 Neurobiology – cannot count for both Biology major and Neuroscience minor

Other Electives - Do not count towards "two different categories" requirement

- B BIO 485 Senior Seminar in Biology
- B BIO 4XX Teaching Biology
- BES 460 Water Quality

Additional Courses

- As needed to fulfill University General Education Requirements and to equal 180 credits.

Program Policies

If more than one course is taken from the list of courses that satisfy the Ecology, Cell Biology, or Physiology requirement, then the additional courses may be counted as Biology Electives. For example, if a student takes both Cell Biology and Microbiology, one can count toward the Cell Biology requirement, and the other as a B-category Biology Elective.

Some courses may be used to satisfy the Biology and Society requirement, or a Biology Elective requirement, but a single course cannot be used to satisfy both requirements. For example, BES 489 (Pacific Northwest Ecosystems) may count either as a Biology elective or as a Biology and Society course, but not both.

The lists of electives and Biology and Society courses are updated on a regular basis. Please verify that a course fulfills the requirement with your Program Advisor.

Biology Minor

Biology is a well-established field of study that spans vastly different levels of organization, space, and time: from molecules to ecosystems, and from nanoseconds to billions of years. Undergraduate study of Biology will help you to better understand both humans and the natural world, and helps to position you for employment opportunities in research, teaching, healthcare and medicine, environmental science, or biotechnology.

The Biology Minor offers students who are not majoring in Biology an opportunity to delve into the field. Many areas of study intersect with biology, from other natural sciences (chemistry, physics, environmental science, climate science) to computer science, mathematics, and engineering, and disciplines outside the STEM fields (business, education, ethics, environmental studies). The Minor in Biology allows students majoring in these and other areas to explore biology in greater depth, to better understand these connections.

Required Courses (15 credits) — Complete all of the following:

- B BIO 180 (Introductory Biology I)
- B BIO 200 (Introductory Biology II)
- B BIO 220 (Introductory Biology III)

Elective Courses (20 credits)

Choose 20 credits of coursework from at least two different categories on the list of electives for the major (see previous page). Each elective course is 5 credits unless otherwise noted.

For the purposes of the Biology minor, Evolution (B BIO 466) is a Category A elective, and Introduction to Genetics (B BIO 360) is a Category B elective.

Consciousness Minor

The Consciousness minor investigates the nature, dynamics, and functions of the mind through the perspectives of psychology, neuroscience, physics, biology, and contemplative practices. It utilizes both objective and subjective methods to explore levels of awareness, the intersection of mind and matter, and ways to enhance individual and collective well-being. The Consciousness minor is open to all UWB students in order to enrich their work in other areas of academic inquiry. Students from the other UW campuses may enroll on a space available basis.

Required Courses (10 credits) — Complete all of the following:

- BST 321 The Farther Reaches of Human Nature
- BST 322 Exploration of Consciousness

Elective Courses (15 credits) — Choose three courses:

- B BIO 310 Brain and Behavior
- B PHYS 305 The Cosmos
- BCOSNC 293 Intersections of Physics and Art
- BCONSC 323 The Psychology and Science of Dreams
- BCONSC 325 Mind and Matter
- BCONSC 424 Consciousness, Ethics, and the Natural World
- BCONSC 425 Consciousness and Well-Being

Neuroscience Minor

Neuroscience is an established, yet rapidly growing field that explores the molecular, cellular, and systems bases of neural function, as well as the neural basis of behavior and cognition.

The Neuroscience Minor offers students an opportunity to delve more deeply into this exciting and multifaceted discipline, whether to supplement a degree in biology, computer science, or engineering; to expand their understanding of cutting-edge research that regularly appears in the news; or to ready themselves for a neuroscience-based graduate program or career. Students who complete a neuroscience program are also equipped for educational and employment opportunities in research, teaching, medicine, and allied health.

Required Courses (15 credits) — Complete all of the following:

- B BIO 310 Brain and Behavior
- B BIO 351 Anatomy and Physiology I
- B BIO 480 Neurobiology

Elective Courses (10 credits) — Choose two courses:

- B BIO 355 Behavioral Endocrinology
- B BIO 385 Animal Behavior
- B BIO 394 Special Topics in Neuroscience
- BIS 270 Abnormal Psychology
- BIS 422 Clinical Psychology
- B BIO 499 Undergraduate Research in Biology (approved Neuroscience research only)

Division of Computing and Software Systems

Bachelor of Arts in Applied Computing (BA)

The Bachelor of Arts in Applied Computing (AC) is a multidisciplinary degree that allows students to become experts in integrating computer technology across their minor elective field. In their CSS coursework, students concentrate on programming, software engineering, management, communications, and hardware and operating systems from an application perspective. These core classes create a solid foundation of knowledge in computer hardware, programming, and software development.

Students combine their CSS coursework with studies in a non-computing subject that is of interest to them. This subject area, called a Minor Elective, can take the form of either an established minor at the University of Washington or an approved concentration of courses that covers complex subject matter.

To integrate their CSS coursework with the courses in their minor elective, Applied Computing students take part in a final Applied Computing Capstone, where they gain a deeper understanding of the

inherent relations between computing and software development and their concentration in another discipline.

Admission Requirements

- English Composition: (B WRIT 134) or ENGL111, 121, 131
- Advanced English Composition: (B WRIT 135), or ENGL 281, C LIT 240 or HCDE 231
- Programming I: CSS 142 or 161; or CSE 142;
- Programming II: CSS 143 or 162; or CSE 143
- Calculus: STMATH 124 or MATH 124
- Statistics (recommended for admission; must be completed before graduation)

Program Structure

Students entering the AC major Autumn Quarter 2016 and thereafter follow the curriculum outlined below.

Required Core Courses (30 credits)

- CSS 301 - Technical Writing for Computing Professionals
- CSS 340/342 – Applied Algorithms /Data Structures, Algorithms and Discrete Mathematics I
- CSS 350 - Management Principles for Computing Professionals
- CSS 360 - Software Engineering
- CSS 421 - Introduction to Hardware Architecture and Operating Systems
- CSS 496 - Applied Computing Capstone

CSS Electives (25 credits)

A maximum of 10 credits are allowed at the 200 level, a maximum of 10 credits of CSS 390 and 490 (Special Topics) are allowed, and a maximum of 15 credits of combined 397, 495, 498, and 499 are allowed towards the CSS Elective requirement.

Minor Electives (25 credits*) or any other non-computing related Major (or approved course of study)*

This must be an approved minor, concentration, or major from another department or program. Students may also work with CSS faculty and program advisors to develop custom knowledge domain expertise - subject to departmental approval. If student has a baccalaureate degree in another area, this requirement may be waived. Students must submit a Minor Elective Contract for approval to the CSS advisor by the end of their 3rd quarter in the major.

Upper Level Electives (10 credits)

Upper level electives must be at the 300- or 400level. It is recommended that students consider taking additional courses in CSS or related to their minor to satisfy this requirement.

Graduation Requirements

- 180 or more total credits
- 70 upper-division credits (300-400 level)
- Completion of the last 45 credits at UW Bothell
- To graduate, new students entering the AC major Autumn Quarter 2007 and thereafter must earn a grade of 2.0 in any course offered by, or required by, the AC major
- 15 credits of Visual, Literary, and Performing Arts
- 15 credits of Individuals and Societies
- 3 credits toward the Diversity requirement

Bachelor of Science in Computer Engineering (BS)

The Bachelor of Science in Computer Engineering combines education in hardware and software development, with students gaining the background necessary to become broadly-educated professionals who are knowledgeable in both domains, understanding how the domains interact, restrict, or enable interdependent capabilities. Core coursework encompasses the physical and mathematical sciences, object-oriented programming, algorithms, data structures, software engineering, technical communications, circuits and systems, microprocessors, embedded systems, and operating systems. The major also offers the opportunity to build a strong foundation in various areas, including network design and development, signal processing, mobile computing, sensor systems, semiconductor

devices, testing and quality assurance, and project management.

Admission Requirements

- English Composition: B WRIT 134, ENGL 111, 121, or 131
- Programming I: CSS 132, 142 or 161; or CSE 142
- Programming II: CSS 133, 143 or 162; or CSE 143
- Calculus: STMATH 124 (Calculus I), STMATH 125 (Calculus II) and STMATH 126 (Calculus III)
- Physics: B PHYS 121 (Mechanics) and B PHYS 122 (Electromagnetism & Oscillatory Motion)

Program Structure

Writing & Oral Communication

- Second Composition, Research Writing, or Introduction to Technical Writing

Mathematics & Natural Sciences

- B CHEM 143/144 - General Chemistry & Lab
- STMATH 307 - Introduction to Differential Equations
- STMATH 308 - Matrix Algebra with Applications
- STMATH 324 - Multivariable Calculus
- STMATH 390 - Probability & Statistics in Engineering

Required Core Courses

- B EE 215 - Fundamentals of EE
- B EE 233 - Circuit Theory
- B EE 235 - Continuous Time Linear Systems
- B EE 271 - Digital Circuits and Systems
- B EE 331 – Devices and Circuits
- CSS 301 - Technical Writing for Computing Professionals
- CSS 342 - Data Structures & Algorithms I
- CSS 343 - Data Structures & Algorithms II
- CSS 360 - Software Engineering
- CSS 427 - Embedded Systems
- CSS 430 - Operating Systems
- CSS 350 - Management Principles for Computing Professionals ***or*** B EE/CSS 371 - Business of Technology
- CSS 422 - Hardware & Computer Organization ***or*** B EE 425 - Microprocessor System Design
- C E 495 Design Capstone I
- C E 496 Design Capstone II

Electives (10 credits)

Electives may be selected from B EE and CSS courses. All CSS/B EE electives must be at or above the 300 level. Of these credits, 5 credits must be at or above the 400 level. A maximum of 5 credits combined can be CSS or B EE Special Topics courses. A maximum of 5 credits combined can be CSS or B EE Independent Study or Undergraduate Research.

Graduation Policies

- Completion of 180 or more total credits including the above stated requirements, with a cumulative GPA of 2.0 or higher
- Students must earn a grade of 2.0 in all required courses (please note that some courses may require a higher prerequisite GPA)
- Completion of the last 45 credits at UW Bothell
- Completion of all University of Washington Bothell graduation requirements

ABET Accreditation

The Bachelor of Science in Computer Engineering program at the University of Washington Bothell is a fully accredited program. For more information about ABET accreditation, please visit http://www.abet.org/.

Bachelor of Science in Computer Science & Software Engineering (BS)

The Bachelor of Science in Computer Science & Software Engineering is a computer science degree that stresses computer programming and people-centered software development processes. Students will gain essential knowledge in object-oriented programming, data structures, algorithm analysis,

software engineering, management principles, hardware architecture and operating systems.

The CSSE elective courses provide the student the opportunity to develop a solid technical foundation of new and complex technologies. Electives include courses in: parallel and distributed computing, computational science and scientific computing, network design, expert systems, cyber security, software design testing, computer vision, systems analysis, human factors, object-oriented programming, multi-media, software marketing, project management, database design, computer simulation, embedded systems, and artificial neural networks.

Admission Requirements

- English Composition: (B WRIT 134) or ENGL 111, 121, 131
- Advanced Composition: (B WRIT 135) or ENGL 281, C LIT 240 or HCDE 231
- Programming I: CSS 132, 142, or 161 or CSE 142
- Programming II: CSS 133, 143, or 162 or CSE 143
- Calculus I: STMATH 124 or MATH 124
- Calculus II:STMATH 125 or MATH 125
- Statistics (recommended for admission; must be completed before graduation)

Program Structure

Students entering the CSSE program Autumn 2006 and thereafter follow the curriculum outlined below.

Required Core Courses (40 Credits)

- CSS 301 - Technical Writing for Computing Professionals
- CSS 342 - Data Structures & Algorithms I
- CSS 343 - Data Structures & Algorithms II
- CSS 350 - Management Principles for Computing Professionals
- CSS 360 - Software Engineering
- CSS 370 - Analysis & Design
- CSS 422 - Hardware & Computer Organization
- CSS 430 - Operating Systems

CSS Electives (25 credits)

CSS electives are 200-400 level courses, of which a minimum of 15 credits must be at the 400 level. A maximum of 10 credits of Special Topics are allowed, and a maximum of 10 credits of combined CSS 397, 498, and 499 are allowed towards the CSS Elective requirement.

CSSE Capstone (10 Credits)

The Computer Science & Software Engineering Capstone is the final core requirement for the degree. The scope and nature of each project will require students to integrate and apply their knowledge in a "real world" setting. Students complete 10 credits (400 hours) of Capstone in their final quarter(s). Project options consist of internships, research with faculty, individual projects, or group projects. Upon completion of the Capstone, students present at the CSS Colloquium.

General Electives (15 Credits)

300 or 400 level classes in any discipline

Graduation Requirements

- 180 or more total credits
- 80 upper-division credits (300-400 level)
- Completion of the last 45 credits at UW Bothell
- To graduate, new students entering the CSS program Autumn 1999 and thereafter must earn a grade of 2.0 in any course offered by, or required by, the CSS program
- 15 credits of Visual, Literary, and Performing Arts
- 15 credits of Individuals and Societies
- 3 credits toward the Diversity requirement

Minors

Students can choose from two minors within CSS: Computer Science & Software Engineering (CSSE) and Information Technology (IT).

The purpose of the CSSE and IT minors is to provide opportunities for students from non-technical disciplines to supplement their major with a practical set of courses focused on information technology. The minors should prepare students for a variety of

industrial, government and business positions involving computer use.

Students on the Seattle and Tacoma campuses need to follow guidelines for cross-campus enrollment.

Procedures
Schedule an appointment with the CSS advisor to complete a "Change of Program or Minor" form upon successfully completing Programming I (for IT minor) and Programming II (for CSSE minor).

CSSE Minor

Requirements:
The CSSE minor provides students with the necessary programming and software management skills to work within a software development environment within their major discipline.

- **Required Courses**
  - CSS 132, 142, or 161; or CSE 142 (2.7 minimum)
  - CSS 133, 143, or 162; or CSE 143(2.5 minimum)
  - CSS 342
  - CSS 360
  - two additional CSS courses above the 200 level, with a minimum of at least 5 credits at the 300- or 400-level
- **Credits: A minimum of 30 credits**
- **At least a 2.0 in each course (unless otherwise noted)**

IT Minor

Requirements:
The IT minor focuses on bridging the technology and information management gap, and gives students a background in software design methodologies, computer programming, database systems and strategies for automating industrial and organizational processes.

- **Required Courses**
  - CSS 142 or 161; or CSE 142
  - CSS 143, 162, 173, or 341; or CSE 143
  - CSS 360
  - CSS 475
  - One additional 5-credit CSS course, at the 200-level or above
- **Credits: A minimum of 25 credits**
- **At least a 2.0 in each course** (unless otherwise noted)

Graduating With a Minor
When applying for graduation, the student's major program advisor will list the minor requirements on the graduation application. Upon graduation, the minor will be indicated on the student's transcript, but it will not appear on the diploma.

Division of Engineering and Mathematics

Bachelor of Science in Electrical Engineering (BS)

The Bachelor of Science in Electrical Engineering provides students with a strong foundation for pursuing careers or graduate studies in Electrical Engineering. Students in the program master the fundamentals and applications of electricity, electronics, and electromagnetism. A multidisciplinary learning environment provides experience in teamwork, design, ethics, entrepreneurship, and civic responsibility, with a focus on understanding the impact of engineering solutions in a global, economic, environmental, and societal context.

The program builds on UW Bothell's strengths, emphasizing lab experience and research and internship opportunities outside the classroom. Our faculty are dedicated to teaching and building excellence and expertise through strong student-faculty relationships, small classes and hands-on, experiential learning principles.

Admission Requirements
The Electrical Engineering major is competitive, having the minimum grade of a 2.0 in the prerequisite courses does not guarantee admission. Prerequisites must be completed prior to admission (see http://admit.washington.edu/EquivalencyGuide for

Washington State Community College transfer equivalencies).

Admission Prerequisites
STMATH 124 - Calculus I
STMATH 125 - Calculus II
STMATH 126 - Calculus III
B PHYS 121 - Mechanics
B PHYS 122 - Electromagnetism and Oscillatory Motion
B CHEM 143/144 - General Chemistry I with Lab or CHEM 142
College-level English Composition course

Program Structure
Core Courses (55 Credits)
B EE 215 Fundamentals of Electrical Engineering
B EE 233 Circuit Theory
B EE 235 Continuous Time Linear Systems
B EE 271 Digital Circuits and Systems
B EE 331 Devices and Circuits I
B EE 332 Devices and Circuits II
B EE 341 Discrete Time Linear Systems
B EE 361 Applied Electrodynamics
B EE 371 Business of Technology
B EE 425 Microprocessor System Design
B EE 495 Design Capstone I
B EE 496 Design Capstone II

Electrical Engineering Electives:
Choose 3 courses from the following list (15 credits); a combined maximum of 10 credits of B EE 490, B EE 498, and B EE 499 may be counted toward the 15 credit requirement

B EE 381 Power Generation
B EE 417 Digital Communication
B EE 433 Electronic Circuit Design
B EE 436 Biomedical Instrumentation I
B EE 437 Biomedical Instrumentation II
B EE 440 Electronic Test and Measurement
B EE 442 Digital Signal Processing
B EE 447 Introduction to Control Systems
B EE 450 Introduction to Power Electronics
B EE 451 Introduction to MEMS
B EE 454 Introduction to RF and Microwave Engineering
B EE 455 Introduction to Electrical Machines and Drives
B EE 477 Power System Fundamentals
B EE 478 Power System Analysis
B EE 482 Semiconductor Devices
B EE 484 Sensors and Sensor Systems
B EE 486 Fundamentals of integrated Circuit Technology
B EE 490 Special Topics in Electrical Engineering
B EE 498 Undergraduate Research in Electrical Engineering
B EE 499 Independent Study in Electrical Engineering

Foundational Courses (80 credits) includes program admission prerequisites
STMATH 124 - Calculus I
STMATH 125 - Calculus II
STMATH 126 - Calculus III
ST MATH 307 Differential Equations
ST MATH 308 Matrix Algebra
ST MATH 324 Multivariable Calculus
ST MATH 390 Probability and Statistics in Engineering
B CHEM 143/144 General Chemistry I/Lab (or CHEM 142)*
B PHYS 121 Mechanics
B PHYS 122 Electromagnetism & Oscillatory Motion
B PHYS 123 Waves
College Level English Composition
B WRIT 135 Research Writing, or Technical Writing
CSS 301 Technical Writing for Computing Professionals
CSS 132 (C++) or CSS 142 (Java) Fundamentals of Computing
CSS 133 (C++) or CSS 143 (Java) Programming Methodology

Additional Courses
As needed to fulfill University General Education Requirements and to equal 180 credits.

Graduation Policies
In order to graduate with a Bachelor of Science in Electrical Engineering (BSEE) from UW Bothell, students are required to complete a total of 180 credits including the above stated requirements with a cumulative GPA of 2.0 or higher. Students must earn a 2.0 or higher in all courses that are required

for the BSEE degree. Students are allowed to transfer a total of 15 credits of EE coursework including cross-campus enrollment, exceptions to this policy must be petitioned. In addition, students must meet all University of Washington Bothell graduation requirements.

ABET Accreditation
The Bachelor of Science in Electrical Engineering (BSEE) program at University of Washington Bothell is a fully accredited program. For more information about ABET accreditation, please visit http://www.abet.org/.

Bachelor of Science in Mechanical Engineering (BS)

As an ABET accredited engineering program, the BSME curriculum emphasizes hands-on experience, collaborative problem solving, and societal implications in the design, production, and implementation of mechanical and thermal fluid systems. It also complements the existing Bachelor of Science in Electrical Engineering (BSEE) major by providing additional learning and research opportunities in biomedical engineering and in power engineering, where electrical and mechanical technologies interweave. Prerequisites may be met through coursework at UW Bothell, another four-year institution, or a community college. Graduates will be prepared for a wide variety of careers inside and outside of engineering, or for continuation of study at the graduate level.

Admission Requirements
The Mechanical Engineering major is competitive; having the minimum grade of a 2.0 in the prerequisite courses does not guarantee admission. Prerequisites must be completed prior to admission (see http://admit.washington.edu/EquivalencyGuide for Washington State Community College transfer equivalencies).

Admission Prerequisite Courses
STMATH 124, 125, and 126 – Calculus 1, 2, and 3
STMATH 307 – Differential Equations
STMATH 324 – Multivariable Calculus
B CHEM 143/144 or CHEM 142 – General Chemistry I
B PHYS 121 – Mechanics
B PHYS 122 – Electromagnetism and Oscillatory Motion
B ME 221 – Statics
B ME 222 – Mechanics of Materials
B ME 223 – Dynamics

Program Requirements
B WRIT 135, ENGL 182, or HCDE 231- Research or Technical Writing
B PHYS 123 – Waves
STMATH 390 – Probability and Statistics for Engineering
B ENGR 310 – Computational Physical Modeling (may substitute AMATH 301 and STMATH 308)
B ENGR 320 – Fundamentals of Material Science or MSE 170 Fundamentals of Material Science
B ME 481 – Engineering Professional Development I: The Citizen Engineer
B ME 482 – Engineering Professional Development II: The Professional Engineer
B EE 371 – Business of Technology
B ME 315 – Introduction to 3D Modeling, Design & Analysis (may substitute ME 123)
B ME 331 – Thermal Fluid Systems Analysis I
B ME 332 – Thermal Fluid Systems Analysis II
B ME 333 – Thermal Fluid Systems Analysis III
B ME 334 – Thermal Fluids Lab
B ME 341 – Mechanical Systems Design I
B ME 342 – Mechanical Systems Design II
B ME 343 – Mechanical Systems Design III
B ME 410 – Electric Power and Machinery

B ME 495 – Capstone Project I
B ME 496 – Capstone Project II
16 credits of Engineering Electives, see department for approved list. No more than 4 credits of B ME 498/499 can be used toward Engineering Electives.

Additional Courses
As needed to fulfill University General Education Requirements (please note that some degree requirements also fulfill General Education Requirements) and to equal 180 credits.

ABET Accreditation
The Bachelor of Science in Mechanical Engineering (BSME) program at University of Washington Bothell is a fully accredited program. For more information about ABET accreditation, please visit http://www.abet.org/.

Graduation Policies
In order to graduate with a Bachelor of Science in Mechanical Engineering (BSME) from UW Bothell, students are required to complete a total of 180 credits including the above stated requirements with a cumulative GPA of 2.0 or higher. Students must earn a 2.0 or higher in all courses that are required for the BSME degree. In addition, students must meet all University of Washington Bothell graduation requirements.

Bachelor of Science in Mathematics (BS)

Mathematics is an established and growing field with students pursuing careers in engineering, actuarial science, database and computer systems administration network and data communication analysis, statistical analysis secondary mathematics teaching and other fields.

Many math students select minors from strategically selected disciplines related to their individual career goals. Students with a major in mathematics often pursue graduate studies in mathematics, physics, and engineering.

Preparation for a career in teaching mathematics
The curriculum represents a standard mathematics degree; however the courses offered also reflect the recommendations put forth by the Mathematical Association of America's (MAA) CUPM Curriculum Guide 2004 (reference is Mathematical Association of America (2004). Undergraduate Programs and Courses in the Mathematical Sciences: CUPM Curriculum Guide 2004. Ret May 2011: http://www.maa.org/cupm/curr_guide.html) for majors preparing to be secondary mathematics teachers. According to MAA, mathematical sciences majors preparing to teach secondary mathematics should:

- Learn to make appropriate connections between the advanced mathematics they are learning and the secondary mathematics they will be teaching. They should be helped to reach this understanding in courses throughout the curriculum and through a senior-level experience that makes these connections explicit.
- Fulfill the requirements for a mathematics major by including topics from abstract algebra and number theory, analysis (advanced calculus or real analysis), discrete mathematics, geometry, and statistics and probability with an emphasis on data analysis;
- Learn about the history of mathematics and its applications, including recent work;
- Experience many forms of mathematical modeling and a variety of technological tools, including graphing calculators and geometry software.

Links:
- Mathematical Association of America (MAA) http://www.maa.org/
- National Council of Teachers of Mathematics http://www.nctm.org/

Mathematics Curriculum Admission Requirements
Must be completed prior to admission (see http://admit.washington.edu/EquivalencyGuide for Washington State Community College transfer equivalencies)

Prerequisites (15 credits) A 2.5 GPA average in the following three courses is required with no grade below a 2.0 in the individual courses.
STMATH 124 – Calculus I
STMATH 125 – Calculus II
STMATH 126 – Calculus III

Program Structure Core Requirements (40 credits)
Complete the following courses with a minimum of 2.0 in each course.
STMATH 307 Differential Equations
STMATH 308 Matrix Algebra
STMATH 324 Multivariable Calculus

STMATH 341 Introduction to Statistical Inference
STMATH 300 Foundations of Modern Mathematics
STMATH 381Discrete Mathematical Modeling or STMATH 405 Numerical Analysis
STMATH 402 Abstract Algebra I
STMATH 424 Introduction to Analysis I

Mathematics Electives – Complete 5 additional STMATH courses at the 300 or 400 level from department-approved list with a minimum of 2.0 in each course. (25 credits)

Supporting Science Course Requirements (16 credits)
B PHYS 121 Mechanics
B PHYS 122 Electromagnetism and Oscillatory Motion
CSS 142 *and* CSSSKL 142 or CSS 161 *and* CSSSKL 161 Computer Programming I

Additional Courses
As needed to fulfill University General Education Requirements and to equal 180 credits.

Minor in Mathematics

Prerequisites (15 credits) A 2.5 GPA average in the following three courses is required with no grade below a 2.0 in the individual courses.
STMATH 124 – Calculus I
STMATH 125 – Calculus II
STMATH 126 – Calculus III

Must complete 25 credits with minimum average GPA of 2.0 distributed as follows:

Core Requirement (5 credits)
STMATH 300 Foundations of Modern Mathematics

Mathematics Electives – Complete 4 additional STMATH courses at the 300 or 400 level from department-approved list. (20 credits)

Division of Physical Sciences

Bachelor of Science in Chemistry (BS)
Bachelor of Science in Chemistry (BS – Biochemistry Option)
Bachelor of Arts in Chemistry (BA)

The Bachelor of Science in Chemistry degree offers students a curriculum that includes all of the key elements in chemistry and is consistent with the recommendations of the American Chemical Society (ACS). Students may choose a Biochemistry option for their Chemistry BS degree, which will be shown on their diploma.

The Bachelor of Arts in Chemistry degree allows students to get a focused STEM degree with an emphasis on chemical education. In consort with the UWB Education program, BA Chemistry students will have the opportunity to complete a Teaching and Learning minor and continue on to get a Washington State secondary teacher certification in Chemistry. Students with this background will find good career opportunities as secondary science teachers in public and private schools. Students in both the BS and BA Chemistry programs will get extensive hands-on opportunities with modern chemical instrumentation. This includes a 400 MHz NMR, a Fourier Transform Infra-Red Spectrometer, Flame Atomic Absorption and other high end instrumentation. Chemistry students at UWB also participate in a capstone project, typically as part of a faculty member's research lab.

In keeping with the interdisciplinary focus of UW Bothell's programs, the BS and BA Chemistry curricula will inform and expose students to the interdisciplinary nature of STEM fields and programs along with training them to solve various technical problems for the general good. At UWB, graduates in chemistry will have an education that fosters creative thinking, which in turn will allow them to address critical challenges and issues in STEM subjects. UWB Chemistry graduates will be noted for their understanding of the application of chemistry courses to disciplines other than their own. Furthermore, they will acquire skills that will enable

them to work effectively by solving problems and communicating results within a growing and diverse field.

Admission Requirements (all chemistry degrees)
The following classes must be completed prior to admission. Applicants must complete each prerequisite with a **minimum grade of 2.0**, and have a **minimum overall GPA of 2.5** to be considered:

- STMATH 124 Calculus I
- STMATH 125 Calculus II
- STMATH 126 Calculus III
- B CHEM 143/144 General Chemistry I w/ Lab
- B CHEM 153/154 General Chemistry II w/ Lab
- B CHEM 163/164 General Chemistry III w/ Lab
- B CHEM 237 Organic Chemistry I
- *B CHEM 238/241 Organic Chemistry II w/ Lab
- *B CHEM 239/242 Organic Chemistry III w/ Lab

* Internal applicants may apply prior to completing Organic Chemistry II, III, and their accompanying labs.

Program Structure — Bachelor of Science in Chemistry
Students taking the Chemistry BS must follow the curriculum outlined below.

Required Courses — Complete all of the following:

- STMATH 124 Calculus I
- STMATH 125 Calculus II
- STMATH 126 Calculus III
- B CHEM 143/144 General Chemistry I w/ Lab
- B CHEM 153/154 General Chemistry II w/ Lab
- B CHEM 163/164 General Chemistry III w/ Lab
- B CHEM 237 Organic Chemistry I
- B CHEM 238/241 Organic Chemistry II w/ Lab
- B CHEM 239/242 Organic Chemistry III w/ Lab
- B PHYS 121 Mechanics
- B PHYS 122 Electromagnetism and Oscillatory Motion
- B PHYS 123 Waves
- B CHEM 294 Chemistry Seminar
- B CHEM 312 Inorganic Chemistry I
- B CHEM 313 Inorganic Chemistry II
- B CHEM 315 Quantitative Environmental Analysis
- B CHEM 364 Biochemistry I
- B CHEM 401 Physical Chemistry I
- B CHEM 402 Physical Chemistry II
- B CHEM 404 Physical Chemistry Lab
- B CHEM 426 Instrumental Analysis
- B CHEM 495 Investigative Chemistry I

Mathematics — Choose one course:

- STMATH 307 Introduction to Differential Equations
- STMATH 308 Matrix Algebra with Applications
- STMATH 324 Multivariable Calculus

Upper Division Chemistry Electives — Complete 16 credits. Each elective course is 5 credits unless otherwise noted:

- B CHEM 310 Molecular Modeling
- B CHEM 350 Atmospheric Chemistry and Air Pollution
- B CHEM 365 Biochemistry II
- B CHEM 366 Biochemistry Lab (3 credits)
- B CHEM 375 Molecular Biology
- B CHEM 493 Advanced Topics in Chemistry (1-5 credits, max. 15)
- B CHEM 494 Special Topics in Biochemistry (3 credits, max. 12)
- B CHEM 497 Apprenticeship in Chemistry Education (1-3 credits, max. 6)
- Approved Independent Study in Chemistry (B CHEM 498) (1-5 credits, max. 10)
- Approved Undergraduate Research in Chemistry (B CHEM 499) (1-5 credits, max. 10)

Upper Division STEM Electives — Complete 5 credits:

- Approved 300- or 400-level courses offered by the School of STEM

Additional Courses

- As needed to fulfill University General Education Requirements and to equal 180 credits

Program Structure — Bachelor of Science in Chemistry with Biochemistry Option

Students taking the Chemistry BS with Biochemistry must follow the curriculum outlined below.

Required Courses — Complete all of the following:

- STMATH 124 Calculus I
- STMATH 125 Calculus II
- STMATH 126 Calculus III
- B CHEM 143/144 General Chemistry I w/ Lab
- B CHEM 153/154 General Chemistry II w/ Lab
- B CHEM 163/164 General Chemistry III w/ Lab
- B CHEM 237 Organic Chemistry I
- B CHEM 238/241 Organic Chemistry II w/ Lab
- B CHEM 239/242 Organic Chemistry III w/ Lab
- B PHYS 121 Mechanics
- B PHYS 122 Electromagnetism and Oscillatory Motion
- B PHYS 123 Waves
- B BIO 180 Introductory Biology I
- B BIO 200 Introductory Biology II
- B CHEM 294 Chemistry Seminar
- B CHEM 315 Quantitative Environmental Analysis
- B CHEM 364 Biochemistry I
- B CHEM 365 Biochemistry II
- B CHEM 366 Biochemistry Lab
- B CHEM 375 Molecular Biology
- B CHEM 401 Physical Chemistry I
- B CHEM 402 Physical Chemistry II
- B CHEM 404 Physical Chemistry Lab
- B CHEM 426 Instrumental Analysis
- B CHEM 495 Investigative Chemistry I

Mathematics — Choose one course:

- STMATH 307 Introduction to Differential Equations
- STMATH 308 Matrix Algebra with Applications
- STMATH 324 Multivariable Calculus

Upper Division Chemistry Electives — Complete 7 credits. Each elective course is 5 credits unless otherwise noted:

- B CHEM 310 Molecular Modeling
- B CHEM 312 Inorganic Chemistry I (3 credits)
- B CHEM 313 Inorganic Chemistry II (3 credits)
- B CHEM 350 Atmospheric Chemistry and Air Pollution
- B CHEM 493 Advanced Topics in Chemistry (1-5 credits, max. 15)
- B CHEM 494 Special Topics in Biochemistry (3 credits, max. 12)
- B CHEM 497 Apprenticeship in Chemistry Education (1-3 credits, max. 6)
- Approved Independent Study in Chemistry (B CHEM 498) (1-5 credits, max. 10)
- Approved Undergraduate Research in Chemistry (B CHEM 499) (1-5 credits, max. 10)

Additional Courses

- As needed to fulfill University General Education Requirements and to equal 180 credits

Program Structure — Bachelor of Arts in Chemistry

Students entering the Chemistry BA must follow the curriculum outlined below.

Required Courses — Complete all of the following:

- STMATH 124 Calculus I
- STMATH 125 Calculus II
- STMATH 126 Calculus III
- B CHEM 143/144 General Chemistry I w/ Lab
- B CHEM 153/154 General Chemistry II w/ Lab

- B CHEM 163/164 General Chemistry III w/ Lab
- B CHEM 237 Organic Chemistry I
- B CHEM 238/241 Organic Chemistry II w/ Lab
- B CHEM 239/242 Organic Chemistry III w/ Lab
- B PHYS 121 Mechanics
- B PHYS 122 Electromagnetism and Oscillatory Motion
- B PHYS 123 Waves
- B CHEM 294 Chemistry Seminar
- B CHEM 312 Inorganic Chemistry I
- B CHEM 315 Quantitative Environmental Analysis
- B CHEM 401 Physical Chemistry I
- B CHEM 402 Physical Chemistry II
- B CHEM 495 Investigative Chemistry I
- B CHEM 497 Apprenticeship in Chemistry Education

Mathematics — Choose one course:

- STMATH 307 Introduction to Differential Equations
- STMATH 308 Matrix Algebra with Applications
- STMATH 324 Multivariable Calculus

Upper Division Chemistry Electives — Complete 9 credits, including at least one lab. Each elective course is 5 credits unless otherwise noted:

- B CHEM 310 Molecular Modeling
- B CHEM 313 Inorganic Chemistry II (3 credits)
- B CHEM 350 Atmospheric Chemistry and Air Pollution
- B CHEM 364 Biochemistry I
- B CHEM 365 Biochemistry II
- B CHEM 366 Biochemistry Lab (3 credits)
- B CHEM 375 Molecular Biology
- B CHEM 404 Physical Chemistry Lab (4 credits)
- B CHEM 426 Instrumental Analysis
- B CHEM 493 Advanced Topics in Chemistry (1-5 credits, max. 15)
- B CHEM 494 Special Topics in Biochemistry (3 credits, max. 12)
- B CHEM 497 Apprenticeship in Chemistry Education (1-3 credits, max. 6)
- Approved Independent Study in Chemistry (B CHEM 498) (1-5 credits, max. 10)
- Approved Undergraduate Research in Chemistry (B CHEM 499) (1-5 credits, max. 10)

Additional Courses

- As needed to fulfill University General Education Requirements and to equal 180 credits

Chemistry Minor

The Chemistry minor at UW Bothell provides students with an understanding of the fundamental principles of the chemical sciences through a combination of coursework and practical laboratory experience. Students gain a working knowledge of the principles of Chemistry and the methodologies needed to solve complex problems and communicate their ideas to the scientific community in general. A minor in Chemistry is beneficial to students majoring in fields such as biology, physics, engineering, environmental science, and mathematics, and those preparing for further study in medicine, dentistry, pharmacy, biotechnology, and forensics. It is also an asset for students considering professional work in laboratory or manufacturing fields where background and experience in chemistry is valuable.

Required Courses (18 credits) — Complete all of the following:

- B CHEM 143 / 144 General Chemistry I w/ Lab
- B CHEM 153 / 154 General Chemistry II w/ Lab
- B CHEM 163 / 164 General Chemistry III w/ Lab

Elective Courses (30 credits)

Complete 30 credits of any 200-level or higher B CHEM coursework.

Bachelor of Science in Physics (BS)

The Physics major creates opportunities for students to acquire critical thinking and reasoning skills, problem-solving abilities, and modeling skills. These skills and abilities will enable physics majors to contemplate careers and graduate school in multiple physics sub-disciplines, engineering, technology, and other mathematical and science related subjects. Students will acquire fundamental knowledge that positions them to be successful and responsible global citizens and lifelong learners.

Admission Requirements

The following classes must be completed prior to admission. Applicants must complete each prerequisite with a **minimum grade of 2.0** to be considered:

- STMATH 124 Calculus I
- STMATH 125 Calculus II
- B PHYS 121 Calculus-based Physics I w/ Lab
- B PHYS 122 Calculus-based Physics II w/ Lab
- B PHYS 123 Calculus-based Physics III w/ Lab

Program Structure

Students taking the Physics BS must follow the curriculum outlined below.

Required Courses — Complete all of the following:

- STMATH 124 Calculus I
- STMATH 125 Calculus II
- STMATH 126 Calculus III
- STMATH 307 Differential Equations
- STMATH 308 Matrix Algebra
- STMATH 324 Multivariable Calculus
- B PHYS 121 Mechanics
- B PHYS 122 Electromagnetism and Oscillatory Motion
- B PHYS 123 Waves
- B PHYS 221 Classical Mechanics
- B PHYS 222 Modern Physics
- B PHYS 224 Thermal Physics
- B PHYS 231 Introduction to Experimental Physics
- B PHYS 317 Mathematical Physics
- B PHYS 321 Electricity and Magnetism I
- B PHYS 322 Electricity and Magnetism II
- B PHYS 324 Quantum Mechanics I
- B PHYS 431 Experimental Physics Lab I
- B PHYS 433 Senior Project
- B PHYS 484 Physics, Society and Industry
- B PHYS 494 Physics Seminar

Upper Division Physics Electives — Choose 20 credits from the following courses. Each elective course is 5 credits unless otherwise noted:

- B PHYS 229 Biophysics I
- B PHYS 293 Special Topics in Physics (1-5 credits, max. 15)
- B PHYS 311 Introduction to Astrophysics I
- B PHYS 312 Introduction to Astrophysics II
- B PHYS 314 Introduction to Cosmology
- B PHYS 323 Electricity and Magnetism III
- B PHYS 325 Quantum Mechanics II
- B PHYS 328 Statistical Physics
- B PHYS 432 Experimental Physics Lab II
- B PHYS 441 Condensed Matter Physics
- B PHYS 442 Condensed Matter Physics II
- B PHYS 450 Computational and Theoretical Modeling in Physics
- B PHYS 493 Advanced Topics in Physics (1-5 credits, max. 15)
- Approved B PHYS 498 Independent Study (1-5 credits, max. 10)

Approved B PHYS 499 Research (1-5 credits, max. 10)*Additional Courses*

- As needed to fulfill University General Education Requirements and to equal 180 credits

Bachelor of Science in Physics (BA)

Students obtaining the Bachelor of Arts in Physics degree use physics as a background for study in other fields. This program will appeal to students interested in a broader and more interdisciplinary physics experience. For example, a student could pair this major with a minor in Teaching and Learning from the

School of Educational Studies if they are interested in teaching science.

The BA in Physics is currently open for enrollment, but will be undergoing changes in the near future to increase its interdisciplinarity. Please contact School of STEM advising at stemadv@uw.edu if you have questions regarding admission to this major.

Physics Minor

The Physics minor and covers a flexible subset of the major degree, with applications to other scientific and science-related fields. Students of biology, business, engineering, environmental science, chemistry, mathematics, and other disciplines will find relevant courses in the minor to further their education goals. The Minor in Physics requires completion of 30 credits, with **minimum average grade of 2.0**.

Required Courses (15 credits) — Complete all of the following:

- B PHYS 122 Electromagnetism and Oscillatory Motion
- B PHYS 123 Waves
- B PHYS 224 Thermal Physics

Elective Courses— Choose 15 credits from the following courses. Each elective course is 5 credits unless otherwise noted:

- B PHYS 221 Classical Mechanics
- B PHYS 222 Modern Physics
- B PHYS 229 Biophysics I
- B PHYS 231 Introduction to Experimental Physics (3 credits)
- B PHYS 293 Special Topics in Physics (1-5 credits, max. 15)
- B PHYS 311 Introduction to Astrophysics I
- B PHYS 312 Introduction to Astrophysics II
- B PHYS 314 Introduction to Cosmology
- B PHYS 317 Mathematical Physics
- B PHYS 321 Electricity and Magnetism I
- B PHYS 322 Electricity and Magnetism II
- B PHYS 323 Electricity and Magnetism III
- B PHYS 324 Quantum Mechanics I
- B PHYS 328 Statistical Mechanics
- B PHYS 431 Experimental Physics Lab I
- B PHYS 432 Experimental Physics Lab II
- B PHYS 441 Condensed Matter Physics
- B PHYS 442 Condensed Matter Physics II
- B PHYS 450 Computational and Theoretical Modeling in Physics
- B PHYS 484 Physics, Society and Industry
- B PHYS 493 Advanced Topics in Physics (1-5 credits, max. 15)
- B PHYS 494 Physics Seminar (1 credit)
- Approved B PHYS 498 Independent Study (1-5 credits, max. 10)
- Approved B PHYS 499 Research (1-5 credits, max. 10)

VII. Master Degrees

School of Business

Master of Business Administration (MBA)

The University of Washington Bothell offers two MBA programs, the Technology MBA (TMBA) Program at Bothell and the Leadership MBA (LMBA) Program at Bellevue. Both programs are AACSB-accredited, evening degree programs.

The University of Washington Bothell also offers a concurrent degree program. The PharmD-MBA concurrent degree program is a unique collaboration between UW School of Pharmacy and UW Bothell School of Business that brings together the top of executive education value with the top pharmacist training program in the region. The program is available to first-year students who are already in the PharmD program and weave MBA courses in with

their pharmacy degree coursework. Pharm-DMBA students can select courses within the Technology and Leadership MBA curriculum to fulfill the concurrent degree requirements.

The MBA programs are built on a cohort model that emphasizes small class sizes and interactive learning to provide an exceptional and rigorous learning environment. Courses taught by distinguished faculty are built on a core of traditional business courses such as strategy, finance, economics, accounting, statistics, marketing, operations, management and organizational behavior.

The Technology MBA Program at Bothell enables students in technology-centered enterprises to develop their intrapreneurship and entrepreneurship skills and prepares them to create innovative high-growth businesses within established organizations or start-up businesses. The Leadership MBA Program at Bellevue enables students from a wide range of industries to develop the analysis, problem-solving, communication and team work skills necessary to maximize their leadership potential. A hallmark of the UWB MBA programs is interaction with successful managers who share their winning strategies and practicum where students work with mentors and leadership coaches in integrating the theory and practice of business.

Students are challenged and supported as they strive to develop their leadership and management expertise. With the right degree of commitment, program participants can look forward to graduating with the skills, knowledge, and confidence needed to effectively lead in the global marketplace.

Admission Requirements

The MBA Programs at UW Bothell invite applications from professionals who have an undergraduate degree in any field. Prior courses in business are not required.

MBA applicants should be highly motivated and have a personal record of achievement and responsibility. Duration and type of professional work experience figure prominently in the evaluation of applicants. To ensure a dynamic and productive learning environment, participants should also be adept at managing their time, taking responsibility for their own learning, challenging themselves, and combining their business experience and coursework in meaningful ways.

In assessing your application to the MBA program of your choice, the admission committee will consider:

1. Previous work experience including type, duration, level of responsibility, career progression, and recent community service;
2. Recent GMAT (Graduate Management Admission Test) or GRE (Graduate Record Examination) score
3. Previous academic performance;
4. Response to two essay questions;
5. Recommendations from two professional and/or academic references; and
6. TOEFL score, less than two years old, for applicants whose undergraduate degree is not from an accredited US institution or whose native language is not English.

To learn more details about the UWB MBA admissions requirements and deadlines, please visit our website: www.uwb.edu/mba.

MBA Curriculum

Students complete the same core courses in the first year of the program. Courses for the Technology MBA are offered Monday and Wednesday evenings in Bothell. Courses for the Leadership MBA are offered Tuesday and Thursday evenings in Bellevue.

First-Year Required Courses (4cr. ea):

- Leadership Team Process and Decision Making
- Statistics for Business
- Managing Organizational Effectiveness
- Marketing Management
- Financial Reporting & Analysis (Accounting)
- Microeconomics for Business
- Financial Management

Total Core Credits Required First-Year: 28

Technology MBA Second-Year Required Courses (4 cr. Ea)

- Leadership & Social Responsibility
- Global Business
- Operations Management
- Technology & Innovation Management
- New Product Marketing
- Strategic Management

Leadership MBA Second-Year Required Courses (4 cr. Ea)

- Leadership & Social Responsibility
- Global Business
- Operations Management
- Advanced Leadership Models
- Global Economic Issues
- Strategic Management

Total Core Credits Required Second-Year: 24

20 Elective credits are required to complete the degree. Students complete elective credits during first or second summer, second winter or second spring quarters. Academic advisors work with students to design a degree plan that meets their needs.

Total Credits Required to Complete the Degree: 72

Master of Science in Accounting (MS)

The University of Washington Bothell offers a Master of Science in Accounting. Evening and afternoon classes are held at the Eastside Leadership Center in Bellevue and the Bothell campus. Students study fundamental accounting principles and develop advanced knowledge and critical thinking skills.

The program helps students gain critical insights into advanced financial reporting, auditing and managerial accounting and provides credits needed to satisfy the fifth year educational requirement necessary for CPA examination eligibility. Drawing from contemporary research, UW Bothell MS Accounting students will graduate with an awareness of the current intellectual debates surrounding accounting rules. World-class faculty will provide strong analytical, research and business communication skills that will get students noticed by industry and public accounting firms.

Admission Requirements

The MS Accounting Program at UW Bothell accepts applications from professionals who have an undergraduate degree in Accounting or in Business at a recognized four-year U.S. University or equivalent institution. Students that do not have an undergraduate degree in Accounting or Business but complete the necessary prerequisite coursework are eligible to apply. In addition to having completed the necessary pre-requisite coursework, admission decisions will be based on multiple criteria such as the candidate's overall and accounting GPAs, personal interviews and, unless specifically waived by the admissions committee, performance on the GMAT exam.

Prerequisite Coursework

Applicants must have completed, or expect to have completed by the time they start the Master's program, upper level undergraduate Accounting courses in the following areas:

- Intermediate Accounting
- Cost Accounting
- Federal Income Taxation
- Auditing
- Accounting Information Systems

To learn more details about the UWB MS Accounting admissions requirements and deadlines, please visit our website: www.uwb.edu/ms-accounting.

MS Accounting Curriculum

The MS Accounting program allows students to connect studies with the contemporary business environment. Courses offer a balance of theoretical and practical knowledge relevant to accountants, which aims to build human capital for short and long term.

The program consists of seven required core classes (25 credits) and five elective classes (20 credits) offered during autumn, winter, spring and summer quarters each academic year. Students complete the

program in one year on a full-time schedule or may choose to earn the degree on a part-time schedule.

Students will learn a body of knowledge that is of immediate relevance to practicing accountants along with a working understanding of the foundations of modern finance and economics. Specifically, we expect our MS Accounting students to acquire a graduate level knowledge base in these topics and areas:

- Advanced accounting topics including consolidations and foreign currency issues
- Governmental and nonprofit accounting models
- Fundamental principles of Accounting Theory
- Advanced issues in managerial accounting
- Business law and ethical frameworks for decision making
- Critical perspectives on advanced financial reporting
- Analysis of financial statements for valuing a firm
- Modeling consequences of accounting rules and regulations
- Advanced auditing and forensic techniques
- Tax planning and research methodologies

Core Courses (25 Credits Required):

Accounting Theory (4 cr.)
Advanced Managerial Accounting (4 cr.)
Corporate Financial Reporting (4 cr.)
Financial Statement Analysis (4 cr.)
Seminar on Financial Accounting (4 cr.)
Seminar on Strategic Cost Management (4 cr.)
The Accounting Profession (1 cr.)

Electives: (20 Credits Required)

Students are required to complete 20 credits of elective coursework. The program offers an extensive set of elective courses that provide flexibility and allow students to customize their MS Accounting program based on areas of interest and career goals. Electives are available in advanced areas of Financial and Managerial Accounting, Auditing and Tax, and Forensic Accounting, as well as Finance, Economics and other business disciplines within the MBA elective coursework. Special topics include a variety of interest areas, and may vary each quarter.

School of Educational Studies

Master of Education in Educational Leadership (LEDE Program)

The Leadership Development for Educators (LEDE) program is designed to build on an existing foundation of instructional leadership while supporting current teachers as they transition to administrative positions in schools and districts. LEDE focuses on performance tasks completed by participants on-the-job in their school or district, a mentored internship, and intensive seminars on Saturdays and during a 3-day summer workshop. The LEDE program culminates with a Master of Education degree and Washington State Residency Principal Certification.

LEDE Program Philosophy

Many of the instructional leadership skills that are central to principal success are developed over time as teachers take on challenging responsibilities in their schools.

This understanding is the foundation for the principal preparation program that UW Bothell offers in partnership with several school districts, the Center for Strengthening the Teaching Profession, and the Center for Educational Leadership. With new thinking about how to … ‘ ‘ ” † ‹ • ƒ – ‡ – ‡ ƒ -the-job” learning and university classes, the program supports teacher instructional leaders and helps them document their learning so that it contributes to requirements for a Master of Education degree and Washington State Residency Principal Certification.

A Two-Part Program Structured for Working Teachers

Coursework, performance tasks, and on-campus classes are built around e-learning and commuter-friendly Saturday Seminars.

Part 1 launches with two seminars on instructional and personal leadership. Teachers then join a network of teacher instructional leaders and work at their own pace with a set of performance tasks that relate directly to the work of instructional and personal leadership in schools. Part 1 includes the first of two 400-hour internships. Saturday seminars and quarterly progress reviews provide feedback and assistance.

Part 2 continues the cohort-based program, with an intensive 3-day Summer Institute, followed by year-long Saturday seminars and a simultaneous 400-hour internship. Like Part 1, Part 2 features a balance of e-learning, face-to-face seminars, and clinical practice.

A Performance-Based Program

A series of structured and practical performance tasks integrate learning from seminars, e-learning, and clinical practice. Through these tasks, candidates document both practical experience and conceptual understandings related to all certification standards and UW Bothell M.Ed. degree requirements.

Part 1 ***Saturday Seminars***

Introductory Quarter: Spring (Early Start) (2 credits)*

- **LEDE 520** Leadership for Curriculum and Teaching (2 credits)

**For teachers with pre-requisite instructional leadership experience, these 2 credits are not required and student is admitted directly into Autumn Quarter.*

Autumn Quarters (6-12 credits)*

- **LEDE 520** Leadership for Curriculum and Teaching (6 cr)
- **LEDE 510** Personal Leadership for Schools (6 cr)

Spring Quarter (2 credits)*

- **LEDE 510** Personal Leadership for Schools (2 cr)

**Enrollment during Autumn and Spring quarters depends on prior experience as a teacher leader and prior academic coursework that is appropriate for transfer into the program. Prior instructional leadership experience and coursework is determined during the admissions process.*

Part 2 ***Saturday Seminars***

Autumn, Winter, and Spring Quarters (24 cr total)

- **LEDE 530** Leading Schools as Responsive Public Institutions (2-6 cr, max. 8)
- **LEDE 540** Leading Schools as Continuously Renewing Organizations (2-6 cr, max. 8)
- **LEDE 550** Leading Inclusive School Communities (2-6 cr, max. 8)

Master of Education (M.Ed.)

Admission to this program is paused for 2018-19. Please visit our website at* www.uwb.edu/education *for more information.

In the Master of Education program, students are encouraged to think deeply about the complex nature of education and to explore questions central to their own professional growth. The M.Ed. program integrates inquiry, diversity, and leadership in education throughout its courses. These themes are also the focus of the three required core courses and are woven throughout •–—†‡•–•ï •–—†‹‡•ä ––—†‡•–• •Š‘— to growing in the skills of writing, critical thinking, and collaborative learning. Students will either choose an individual program of study or a concentration area to focus on. Master of Education students must complete a minimum of 46 credits.

Core Courses

The program generally begins with three core courses. These courses focus on:

- Examination of research methodologies and the generation of research questions. **(B EDUC 501)**
- The use of multicultural education as a theoretical foundation for examining the ways in which students' biographical

journeys, values, and beliefs influence the questions they raise and the framing of those questions. (**B EDUC 502)**

- Organizational change and school reform as well as the responsibilities of professional leadership related to educational change. (**B EDUC 504)**

Programs of Study

Students have the option of either completing a concentration area in the M.Ed. program or creating their own individual program of study. The concentration areas are:

- Literacy Assessment and Instruction (leading to the Reading Endorsement)
- English to Speakers of Other Languages (leading to the ESOL Endorsement)

For those students who are interested in creating their own individual program of study, they may choose elective courses under the guidance of their faculty advisor in addition to completing the core courses. These may be selected from M.Ed. courses, or students may elect to take appropriate courses in other academic programs such as the UW Bothell Master of Arts in Policy Studies or the College of Education at UW Seattle. A maximum of twelve credits of graduate-level coursework may be taken outside the Education program.

Literacy Assessment and Instruction

The Literacy Assessment and Instruction concentration can lead to the Washington State Reading Endorsement for practicing teachers who hold an elementary or secondary teaching certificate. Teachers who complete the requirements for the Reading Endorsement will be prepared to be reading specialists or literacy coaches.

In order to complete the Reading Endorsement, students must complete an approved Reading Endorsement course of study (25 credits) which will help them meet the areas of competency established by the Office of Superintendent of Public Instruction (OSPI). This course of study will also help them meet the higher levels of competency established by the International Reading Association for reading coaches or specialists. Students must also pass the NES ò • • ‡ • – ‹ ƒ Ž ‘ • ’ ‘ • ‡ • – • ˆ ‘ ” Ž ‡ • ‡ • – ƒ ” › • • – ” — … – ‹ ‘ • ó – ‡ • – – ‘ • ‡ ‡ – • – ƒ – ‡ ” ‡ “ –

Students will work with a faculty advisor to develop an individualized plan for completing the 25 credits required for the Reading Endorsement. The course schedule has been established so that students can complete the requirements over a two-year period while attending school on a part-time basis. Student take four required courses (16 credits) and choose three elective classes (9 credits) from a list of courses offered by UW Bothell to fulfill the endorsement requirements.

Core Courses: 16 credits

BEDUC 508 Early Literacy Development and Instruction (3)*
BEDUC 517 Working with Readers who Struggle Grades 3-8 (3)*
BEDUC 510 Literacy Assessment and Instruction for Diverse Learners (5)*
BEDUC 511: Reading Practicum: Responsive Small Group Instruction (5)
Required practicum; offered in summer

Elective Courses: 9 credits chosen from this list:

BEDUC 521 Using Multicultural Literature in the Classroom (3)
BEDUC 534 Current Issues in Literacy Research (3)
BEDUC 535 Writing Across the Curriculum (3)
BEDUC 537 Assessment (3)
BEDUC 538 Adolescent Literacy (3)

**Key assessment for endorsement*

English to Speakers of Other Languages (ESOL)

Certified Washington State teachers who successfully complete the ESOL concentration and additional requirements will be able to add the ESOL endorsement to their existing certification. The English to Speakers of Other Languages (ESOL) concentration is designed to guide educators through the entire process of supporting speakers of other languages learning English from classroom inclusion through program leadership and assessment.

The complete ESOL course of study is four graduate-level classes, and one field-based practicum, for a total of 20 credits. Current certified teachers who wish to earn the ESOL endorsement may be able to complete the practicum in their current classroom or in another K-12 school that employs a certified ESOL teacher. Non-certified students may also complete a practicum appropriate to their area of interest but will not be eligible for the endorsement. Teachers must also pass the WEST-E test for ESOL to meet state requirements for the endorsement.

Graduate students may take any of the ESOL classes as long as they meet the prerequisite requirements (see catalog descriptions). In order to earn the ESOL endorsement, teachers must take all four of the required courses and pass the WEST-E test for ESOL.

- **B EDUC 541 Second Language Acquisition, Bilingual Education, and the Structure of English (5 cr)**
- **B EDUC 542 Curriculum, Instruction, and Assessment in English for Speakers of Other Languages (5 cr)**
- **B EDUC 543 Practicum in ESOL (5 cr)**
- **B EDUC 544 Leadership, Advocacy, and Program Assessment in ESOL ESOL (5 cr)**

M.Ed. Completion Dossier

The M.Ed. Completion Dossier provides an opportunity for candidates to demonstrate comprehensive knowledge, skills, and dispositions ƒ • • ‘ … ‹ ƒ – ‡ † ™ ‹ – Š – Š ‡ ’ ” ‘ ‰ ” ƒ • ï • ‘ ˜ ‡ ” ƒ Ž Ž ‰ ‘ ƒ Ž • ˆ ‘ ” academic learning and improvement of professional practice in education. The Completion Dossier ensures breadth of academic work and application of knowledge in each … ƒ • † ‹ † ƒ – ‡ ï • ™ ‘ ” • – ‘ ™ ƒ ” † – Š ‡ ä † ä † ‡ ‰ ” ‡ ‡ á ™ Š ‹ … Š ‹ • ‰ — ‹ † ‡ † „ › – Š ‡ † — … ƒ – ‹ ‘ • ” ‘ ‰ ” ƒ • † ‹ ‰ ƒ Ž • – Š ‡ degree.

The Completion Dossier contains four sections:

1. An **introduction** to the Completion Dossier, in which the student describes how four academic products and one application product to be presented in the dossier, taken as a whole, meet the † — … ƒ – ‹ ‘ • ” ‘ ‰ ” ƒ learning goals as elaborated in the rubric for completion dossiers
2. **Four substantive academic products** normally developed in conjunction with four different graduate courses
3. **One application of knowledge** product that demonstrates a student's understanding and application of the inquiry process. Students may develop this product as an assignment within a course or through an alternative pathway with guidance from a faculty advisor.
4. A **reflection** on their own growth as a student during the course of the program and how the contents of the Dossier reflect that growth.

Students completing their M.Ed. Dossier must register and receive credit for **B EDUC 594 Completion Dossier (1 cr).**

Admissions Requirements

To be accepted into the Master of Education program, applicants must meet the following minimum requirements:

- A bachelor's degree from an accredited institution
  - G.P.A. of 3.0 in the last 90 credits of upper-division graded coursework
- Applications will also be evaluated on the basis of:
  - Admission essay
  - Two letters of recommendation
  - Resume

Graduate School Requirements

In addition to University of Washington Bothell requirements, students must meet the following requirements to receive the master's degree:

- At least 18 numerically graded credits must be taken at the 500 level or above.
- The Graduate School accepts numerical grades (1) in approved 400-level courses

accepted as part of the major, and (2) in all 500 level course work. A minimum cumulative G.P.A. of 3.0 is required.

- All work for the Master of Education degree must be completed within six years.
- For matriculated graduate students in another program, a maximum of 10 credits of graduate course work may be considered for transfer into the program based on the provisions and regulations of the Graduate School. A minimum grade of 3.0 is required for each course.
- A maximum of six credits at the graduate level may be considered for transfer into the program for non-matriculated graduate students. A minimum grade of 3.0 is required for each course.
- No courses below the 300 level will be accepted.
- For additional Graduate School requirements, see the University of Washington General Catalog.

School of Interdisciplinary Studies

Master of Arts in Cultural Studies (MACS)

The Master of Arts in Cultural Studies is the first graduate program in the Pacific Northwest to partner the interdisciplinary study of art and culture with community-based learning and research.
Emphasizing theory and practice, inquiry and engagement, social justice and equity, it provides students varied opportunities to analyze and transform cultural practices.

Students develop the skills and knowledge needed to succeed professionally within arts and cultural institutions, advocacy and community development, education and nonprofit organizations, freelance careers, and cross-sectoral collaborations. The program also prepares students for advanced graduate studies across the arts, humanities, social and natural sciences.

The Cultural Studies curriculum is cohort-based. The learning environment is intentionally collaborative and responsive, building on the strengths, interests, and experiences of students and faculty.

The Cultural Studies curriculum is founded on the belief that transformative learning requires participation, practice, and diverse points of view. Through classroom seminars, community-based learning, and a capstone project, the program provides students with rich opportunities to develop a dynamic portfolio that reflects upon and showcases their work as researchers, artists, educators, and/or activists.

Course Sequence

	Autumn Quarter	Winter Quarter	Spring Quarter
Year One	BCULST 500: Formations of Cultural Studies (5 credits) Cultural Studies elective (5 credits)	BCULST 502: Cultural Studies Research Practices (5 credits) Cultural Studies elective (5 credits)	BCULST 501: Cultural Studies as Collaboration (5 credits) Cultural Studies elective (5 credits)
Year Two	BCULST 510: Engaging Cultural Studies (5 credits) Cultural Studies elective (5 credits)	BCULST 511: Portfolio and Professional Development (1 credit) Cultural Studies elective (5 credits) Cultural Studies elective or BCULST 598 Directed Research (5 credits)	BCULST 512: Cultural Studies and its Publics (10 credits)

Master of Arts in Policy Studies (MAPS)

The Master of Arts in Policy Studies is a community of people who believe policy can make a difference, promote the public good, and advance social equity. It offers an integrated, interdisciplinary approach to the study and practice of contemporary policy-making. Students learn rigorous policy analysis and research skills, and a thorough understanding of the policymaking process. They also develop the professional competencies in management, leadership, strategic planning, and program evaluation essential to working effectively with diverse groups for sustainable social change.

The Policy Studies program prepares students for a variety of careers involving policy analysis, research, community development, public service, democracy building, consulting and social problem solving. Policy Studies alumni act as leaders and change makers regionally, nationally and internationally in public, private, and non-profit organizations.

The Policy Studies learning community is cohort-based. Students enter with diverse academic, professional, and personal backgrounds and a range of policy interests and commitments. Evening classes are designed for working professionals, recent graduates, and returning students. Through a scaffolded curriculum of core classes, a community-based practicum experience, and a capstone project, students acquire the depth of knowledge, practical experiences, and sophisticated professional skills critical to their success as future leaders.

Course Sequence

	12 month program
Early Fall	BPOLST 510 Statistics Fundamentals for Policy Studies (5)
Autumn	BPOLST 511 Policy Process and Analysis (5) BPOLST 509 Pro-seminar (1) Policy Elective (5): Sustainability, Social Policy, Leadership etc
Winter	BPOLST 502 Statistics for Policy Studies (5) BPOLST 513 Practicum (5) BPOLST 509 Pro-seminar (1)
Spring	BPOLST 514 Management and Program Evaluation (5) Research Methods Requirement (5): BPOLST 594 Research Design, BPOLST 520 Internship, or BPOLST 598 Directed Research in Advanced Quantitative Methods BPOLST 509 Pro-seminar (1)
Summer	BPOLST 515 Capstone (6) BPOLST 509 Pro-seminar (1)

Master of Fine Arts in Creative Writing and Poetics (MFA)

The Master of Fine Arts in Creative Writing & Poetics is dedicated to helping each student develop their creative work through a course of study that encourages exploration and discovery.

The intensive, first-year curriculum is based on areas of inquiry, rather than genres (poetry, fiction, non-fiction), creating an alternative to most regional and national MFA programs. Workshops and seminars explore the central question of poetics: why do we write how we write? Faculty and students inquire into the social, cultural, and technological aspects of writing, and ask: How is creative writing an ethical, political, and aesthetic endeavor? What forms might creative writing take in an interconnected and global society? How does new media alter the context and possibilities for the pursuit of creative writing?
In the second year, students pursue a thesis with an advisor and an individualized course of study. Some degree candidates may choose to write their thesis as a single genre; others may elect hybrid modes that utilize multiple genres or media. The second year is designed to give students access to a broad range of interdisciplinary courses and directed research opportunities so that they can develop an area of expertise pertinent to their written arts and career paths.

Each year, there is a Fall Convergence and Spring Festival in which our graduate students, UW Bothell faculty, and invited nationally and internationally renowned writers engage with each other. These symposia host author and student readings, lectures on poetics, and open discussion.

Course Sequence
The UW Bothell MFA consists of a residency program in its first year, with residency *and* non-residency options in its second year.

	Autumn Quarter	Winter Quarter	Spring Quarter
Year One	BCWRIT 500: Writing Workshop: Between Prose and Poetry (5 credits) BCWRIT 510: Poetics Seminar: Cultural Change and Writing (5 credits)	BCWRIT 501: Writing Workshop: Between Fact and Imagination (5 credits) BCWRIT 511: Poetics Seminar: Writers' Research (5 credits)	BCWRIT 502: Writing Workshop: Processes of Thinking and Memory (5 credits) BCWRIT 512: Poetics Seminar: Art, Technology, Practice (5 credits)
Year Two	BCWRIT 700: Creative Writing Thesis (5 credits) Elective Course (5 credits)	BCWRIT 700: Creative Writing Thesis (5 credits) Elective Course (5 credits)	BCWRIT 700: Creative Writing Thesis (5 credits) Elective Course (5 credits)

School of Nursing and Health Studies

Master of Nursing

The University of Washington Bothell Master of Nursing program prepares nurses for advanced roles in areas such as education, leadership, and population health. While in the program, students collaborate with their Scholarly Faculty Chair to select electives and fieldwork opportunities to create an individualized focus area or to pursue the Administrative Leadership Option.

In addition to the core and elective coursework, students complete at least 100 hours of individualized fieldwork. This practice component in the second year permits substantive experience in a variety of settings in order to examine advanced nursing roles and apply core concepts into the real-world context of heath care. Students also complete either a scholarly, reflective portfolio or a scholarly inquiry guided by their Scholarly Chair.

Curriculum
The Master of Nursing program requires a total of 44 credits; 24 credits of core nursing coursework, 12 credits of elective coursework, and 8 credits of practicum and portfolio. The curriculum meets the American Association of Colleges of Nursing's *Essentials of Master's Education in Nursing* (2011) and is accredited by the Commission on Collegiate Nursing Education. The content highlights scholarly inquiry, health care systems, policies, and social issues related to the pressing health issues facing our state, nation, and the global community. Central to curriculum is the development of leadership skills in practice, research and education through theory, research methods, health care policy, and program development and evaluation. Core nursing values emerge through coursework in ethics, aesthetics, diversity and social justice.

Core Nursing Coursework
BNURS 501 Contemporary Issues in Advanced Nursing Practice
BNURS 504 Disparity & Social Justice in Health Care
BNURS 508 Ethics, Aesthetics
BNURS 525 Healthcare Systems Leadership for Advanced Roles
BNURS 585 Health Policy and Civic Engagement
B NURS 520 Translational Research I
BNURS 522 Translational Research II
BNURS 506 Advanced Pathophysiology, Pharmacology and Health Assessment *or*
BNURS 530 Advanced Practice Management and Administration in Healthcare Organizations
BNURS 505 Program Planning, Practicum and Portfolio (starting 2nd quarter and taken throughout the program. Includes completion of 100 practice hours).

Electives
Students select 12 elective credits in their area of specialization from this list or from across the university. Courses marked with an asterisk are required for students pursuing the Administrative Leadership Pathway*

BNURS 510 Technology and Pedagogy
BNURS 511 Curriculum Development in Nursing Education
BNURS 513 Theories and Methods of Teaching and Learning
BNURS 532 Introduction to Process Management and Decision Making in Healthcare Systems*
BNURS 534 Introduction to Project Management in Healthcare*
BNURS 536 Managing Fiscal Performance in Healthcare*
BNURS 538 Managing and Leading High Performing Teams*
BNURS 540 Health Informatics*

Program Goals
- Evaluate the adequacy of underlying knowledge from nursing science, related fields and professional foundations as it informs advanced practice.
- Competently access and manage health-related issues within a defined population or care system, and evaluate the effectiveness of these advanced nursing practices.
- Utilize knowledge and skills in professional practice among diverse and multicultural populations.
- Demonstrate competence in development of inquiry relevant to practice, education or administration.
- Develop and utilize leadership strategies that foster improvement of health care.
- Articulate ethical issues and responsibilities involved in nursing practice.

Admission to the Program
The Master of Nursing program admits each autumn quarter and is built on a cohort. The degree program is best suited to applicants with at least two years of clinical experience who have strong professional written and oral communication skills.

The Master of Nursing degree coursework may be started prior to formal admission to the program as a graduate non-matriculated student (GNM) fall, winter, spring or summer quarters. GNM status allows students to complete graduate-level courses of which up to 12 credits may later be applied toward the Master of Nursing degree.

Master of Nursing applicants meet the following admission requirements
- A bachelor degree in nursing from an NLN- or CCNE-accredited program*
- A 3.0 grade point average in the last 90 credits
- A statistics course
- English Language Proficiency
- Active and unencumbered Washington State RN license

Admissions Material
- Statement of purpose congruent with the program outcomes.
- Letters of recommendation
- Resume
- National criminal background check with acceptable results

*Alternatively, applicants may meet the education requirements with a nursing associate degree or nursing diploma and a baccalaureate degree in another major other than nursing.

Applicants not holding a BSN must demonstrate competency in population health and team leadership and care coordination. These are fulfilled by completing undergraduate nursing courses at UW Bothell or by petitioning demonstrated competency. Learn more at www.uwb.edu/nhs/mn.

School of Science, Technology, Engineering and Mathematics

Division of Computing and Software Systems

Master of Science in Computer Science & Software Engineering (MS)

The Master of Science in Computer Science & Software Engineering (MSCSSE) partners advanced studies in computer science with detailed analysis of software engineering methodologies. By coupling theoretical computing concepts with real-world problems, students develop the breadth of expertise necessary to succeed in today's competitive software profession, prepared for rewarding positions and advanced career opportunities in sectors such as software development, biotech, medicine, aerospace, entertainment, and finance.

The Master of Science in Computer Science & Software Engineering requires completion of 46-49 credits of graduate level coursework, dependent upon a student's results in the Writing Assessment. Part-time students should plan on enrolling in approximately 5 credits per quarter; full-time students should plan on taking approximately 10 credits per quarter.

Admission Requirements

A Bachelor of Science in Computer Science & Software Engineering, Computer Science, or related field showing the appropriate curriculum, or a bachelor's degree in any field and completion of the Graduate Certificate in Software Design & Development. Please view our website for complete information on how to apply to the Master of Science in Computer Science & Software Engineering: www.uwb.edu/mscsse.

Degree Requirements: (46-49 credits)

- 16 credits of CSS core coursework, including
  - CSS 599: Faculty Seminar (1cr)
  - Students choose one five credit course from each group:
    - Development
    - Design
    - Foundations

    For a current list of courses in each core group, please visit uwb.edu/mscsse
- Writing Courses (1-3 cr total): Based on Writing Assessment results, students may be required to take one or both courses
  - CSSSKL 509: Technical Writing
  - CSSKL 510: Scientific Writing
- Project or Thesis (10 credits)
  - CSS 700: Master's Thesis (10 cr) OR
  - CSS 595: Master's Project (10 cr)
- CSS Elective Courses (20 cr)
  - Electives can consist of CSS 500-level, 600, or approved 400-level courses
  - A maximum of 6 credits of CSS 600: Independent Study or Research, up to 10 credits may be requested up on approved petition.
  - A maximum of 10 credits of approved CSS 400-level courses, upon approved petition.

Additional Information

- Students admitted rom the Graduate Certificate in Software Design and Development may be required to complete 5 – 10 credits of systems coursework as determined by the CSS Faculty upon admission to the MS CSSE program, which may be counted towards the elective requirements.
- With BOTH departmental and UW Graduate School approval, students may petition to include up to 5 credits of graduate-level transfer credits from accredited outside institutions; a minimum grade of 3.0 in each transfer course is required.

- Not more than 12 UW Graduate Matriculated credits may be counted
- Courses in the Graduate Certificate in Software Design & Development cannot be counted towards any CSS Division graduate degree requirements.
- Credits earned in CSS 601 do not apply to degree requirements. CSS 601 is intended for students needing to earn credit for an internship.
- No more than 12 credits derived from any combination of UW Graduate Non-matriculated credits and transfer credits can be applied.
- Minimum grade of 2.7 in each course required to count towards degree requirements.
- Minimum cumulative GPA of 3.0 is required to graduate.

Graduate Certificate in Software Design & Development (GCSDD)

The Graduate Certificate in Software Design & Development (GCSDD) is designed for those who lack formal education in computer science, but desire to enter into the field of software development and/or pursue a Master of Science degree.

Graduate Certificate Course Requirements

The Graduate Certificate consists of 18 credits.

- CSS 501: Data Structures and Object-Oriented Programming I (4cr)
- CSS 502: Data Structures and Object-Oriented Programming II (4cr)
- CSS 503: Systems Programming (4cr)
- CSS 506: Software Development Processes (2cr)
- CSS 507: Software Modeling Techniques (2cr)
- CSS 508: Software Testing and Quality (2cr)

In order to earn the certificate, students must complete ALL courses in the certificate with a minimum of a 2.7 in each class, and a 3.0 cumulative GPA. Certificate courses will not count towards any CSS Division Graduate degree requirements; however, the completed certificate can be used as preparation for admission to either MS degree program for applicants who have a bachelor's degree in a field other than computer science

Admission Requirements

Admission to the GCSDD requires two quarters of object-oriented programming (CSS 142 and 143 or equivalent) and one college level calculus course (BMATH 124 or equivalent), as well as a bachelor's degree from an accredited institution with a 3.0 GPA in the last 90 quarter or 60 semester credits. Admission to the Graduate Certificate is currently for Fall Quarter only, and is competitive.

Master of Science in Cyber Security Engineering (MS)

The Master of Science in Cyber Security Engineering at UW Bothell prepares students to protect today's and tomorrow's cyber systems with the necessary technical and leadership skills. Supported by a collaborative and personal learning environment, students gain expertise and confidence in building more secure systems. Students have the opportunity to gain hands-on experience by conducting research with faculty in a myriad of areas such as penetration testing, emerging technologies, vulnerability analysis, network security, human-computer interaction, wireless security, and cryptography. The Master of Science in Cyber Security Engineering requires 51-54 credits, dependent upon a student's results in the Writing Assessment.

Admission Requirements

A Bachelor of Science in Computer Science & Software Engineering, Computer Science, or related field showing the appropriate curriculum, or a bachelor's degree in any field and completion of the Graduate Certificate in Software Design & Development. Please view our website for complete information on how to apply to the Master's of

Science in Cyber Security Engineering: www.uwb.edu/cybersecurity.

Degree Requirements (51-54 credits)

- Core coursework (31 cr)
  - CSS 517: Information Assurance and the Secure Development Lifecycle
  - CSS 519: Incident Response and Recovery
  - CSS 527: Cryptology and Data Protection
  - CSS 537: Network and Internet Security
  - CSS 577: Secure Software Development
  - CSS 578: Vulnerability Analysis and Detection
  - CSS 599: Faculty Seminar
- Writing Courses (1-3 cr total): Based on Writing Assessment results, students may be required to take one or both courses
  - CSSSKL 509: Technical Writing
  - CSSKL 510: Scientific Writing
- Electives (10 credits) Electives can consist of CSS 500-level, 600, or 400-level courses that have been approved by the Division.
  - A maximum of 6 credits of CSS 600: Independent Study or Research, up to 10 credits may be requested up on approved petition.
  - A maximum of 10 credits of approved CSS 400-level courses
  - Pending BOTH departmental and UW Graduate School approval, students may include up to 5 credits of graduate-level transfer credits from accredited outside institutions; a minimum grade of 3.0 in each transfer course is required.
- Project or Thesis (10 credits)
  - CSS 700: Master's Thesis (10 cr) OR
  - CSS 595: Master's Project (10 cr)

Additional Information

- With BOTH departmental and UW Graduate School approval, students may petition to include up to 5 credits of graduate-level transfer credits from accredited outside institutions; a minimum grade of 3.0 in each transfer course is required.
- Not more than 12 UW Graduate Matriculated credits may be counted
- Courses in the Graduate Certificate in Software Design & Development cannot be counted towards any CSS Division graduate degree requirements.
- Credits earned in CSS 601 do not apply to degree requirements. CSS 601 is intended for students needing to earn credit for an internship.
- No more than 12 credits derived from any combination of UW Graduate Non-matriculated credits and transfer credits can be applied.
- Minimum grade of 2.7 in each course required to count towards degree requirements.
- Minimum cumulative GPA of 3.0 is required to graduate.

Division of Engineering and Mathematics

Master of Science in Electrical Engineering (MSEE)

The Master of Science in Electrical Engineering curriculum is designed to provide students with advanced studies in state-of-the-art technology to become innovators, researchers, and technical leaders in their profession. The MSEE offers either a coursework or thesis option, giving students the opportunity to acquire advanced skills and conceptual understanding of topics in more depth than offered by a Bachelor of Science in Electrical Engineering degree. Graduates will be able to apply

these concepts directly to applications in many diverse fields, but also with special emphasis towards focused areas in biomedical devices and sensors, renewable energy, and embedded system design and characterization.

Admission Requirements
A Bachelor's Degree in Electrical Engineering, or closely related engineering field, from an accredited institution. Applicants applying with a degree in a closely related engineering field are expected to show coursework taken as part of their bachelor's degree, covering a specific knowledgebase of electrical engineering curriculum, including: dc/ac circuits analysis, basic electronics, signal processing, probability and basic programming skills (e.g., MATLAB).

Applicants with a bachelor degree in a STEM field that do not have the above mentioned coursework may take the Certificate in Electrical Engineering Foundations to meet prerequisites.

Degree Requirements (46 cr)

General Requirements
The MSEE curriculum offers students a choice between a thesis or coursework option. Both options require completion of a minimum of 46 credits to earn the degree. The University of Washington requires a minimum grade point average (GPA) of 3.00 to earn a graduate degree. A minimum grade of 2.7 is required in each course that is counted towards the degree.

Coursework Option
The coursework option requires a 1 credit graduate seminar, a minimum of 10 credits of project courses, and a minimum of 35 credits of elective courses. The project courses are designed to provide students with significant design experience in the respective area of electrical engineering. A course counted towards meeting the project course requirement cannot be counted towards an elective requirement.

Thesis Option
Students choosing to pursue the thesis option for the MSEE should meet with a faculty advisor no later than the end of their third (full time) quarter. This meeting will be to discuss potential thesis subjects, provide information on thesis requirements, and solidify their decision to pursue the thesis option. Students interested in pursuing a PhD in Electrical Engineering should strongly consider the thesis option.

The thesis option requires students to complete a minimum of 10 thesis credits and 36 credits of coursework. The coursework of the thesis option includes a 1 credit graduate seminar, 25 credits of electives, and 10 credits of project courses. A course counted towards meeting the project course requirement cannot be counted as an elective.

Course Requirements:

Graduate Seminar (1 credit):
- B EE 599 EE Graduate Seminar (1 credit)

Thesis
- B EE 700 Master's Thesis (10 credits for Thesis option students only)

Project Courses (10 Credits):
- B EE 512 Signal Processing II
- B EE 526 Advanced Topics in Embedded System Design
- B EE 533 Biomedical Devices and Instrumentation
- B EE 542 Solar Cells
- B EE 546 CMOS II
- B EE 552 BioMEMS
- B EE 572 Power System Operation

Elective Courses (Coursework option - minimum 35 Credits; Thesis option – minimum 25 Credits):
- B EE 510 Probability and Random Processes for Electrical Engineers
- B EE 511 Signal Processing I
- B EE 512 Signal Processing II
- B EE 515 Digital Image Processing Applications
- B EE 520 Predictive Learning from Data

- B EE 525 Embedded System Design
- B EE 526 Advanced Topics in Embedded System Design
- B EE 531 Acoustical Engineering Fundamentals
- B EE 532 Acoustical Engineering: Medical Devices
- B EE 533 Biomedical Devices and Instrumentation
- B EE 541 Flexible Electronics
- B EE 542 Solar Cells
- B EE 545 Complementary Metal Oxide Semiconductors I
- B EE 546 CMOS II
- B EE 550 Power Electronics
- B EE 551 Introduction to MEMS
- B EE 552 Biomedical Microsystems
- B EE 554 Planar RF and Microwave Engineering I
- B EE 555 Electrical Machines and Drives
- B EE 571 Power Systems Analysis
- B EE 572 Power System Operations
- B EE 590 Special Topics in Electrical Engineering
- B EE 600 Independent Study/Research (6 credit max)

Additional Information

- With departmental approval, students may include up to 6 credits of graduate-level transfer credits from institutions that are regionally accredited; a minimum grade of 3.0 in each transfer courses is required.
- No more than 12 UW Graduate Non-Matriculated (GNM) credits may be counted.
- No more than 12 credits derived from any combination of UW Graduate Non-matriculated credits and transfer credits can be applied.
- Students must earn a minimum grade of 2.7 in each course to count towards degree requirements.
- A minimum cumulative GPA of 3.0 is required to graduate.
- A maximum of 6 credits of B EE 600 may be used toward degree requirements, students wishing to continue with research should consider the thesis option.
- Students may use a maximum of 10 credits of 400 level BEE undergraduate courses to meet the elective course requirement. Approval by the Division Petition Committee is required before enrolling in the course. See the graduate advisor for restrictions.
- No Electrical Engineering Foundations Certificate courses (B EE prefix) will be counted towards the MSEE degree.
- Credits earned in B EE 601 do not apply to degree requirements. B EE 601 is intended for students needing to earn credit for an internship.
- GCEEF certificate courses will not be counted towards the MSEE degree.

Graduate Certificate in Electrical Engineering Foundations (GCEEF)

The Graduate Certificate in Electrical Engineering Foundations provides a pathway for students trained in other STEM disciplines to earn an EE certificate, and thus be academically prepared to apply for admission to the Master of Science in Electrical Engineering program.

Program Objectives

Students will learn the fundamental concepts of electrical engineering and be prepared for a graduate degree in the field. For students who do not wish to pursue an MSEE degree, the Certificate in Electrical Engineering Foundations provides a strong background that can be leveraged to move into EE related fields.

The GCEEF is geared toward individuals with a bachelor's degree in a STEM field who want to pursue a master's degree in electrical engineering, people with a bachelor's degree in electrical engineering who want to refresh their skills, or professionals working in or hoping to enter a related field, such as

technical marketing or technical program management.

Admission Requirements
A degree in a STEM field and the following courses (or equivalent coursework):

- A full year of Calculus: STMATH 124, 125 and 126
- Differential Equations: STMATH 307
- Matrix or Linear Algebra: STMATH 308
- Multivariable Calculus: STMATH 324
- Engineering Physics 1 and 2: BPHYS 121 and 122
- General Chemistry 1: B CHEM 143 and 144 (lab)

Curriculum
Students enroll in two courses (6 credits) per quarter, for a total of 18 credits

- B EE 503 Circuit Analysis (4cr)
- B EE 504 Device Electronics (4cr)
- B EE 505 Digital Systems (2cr)
- B EE 506 Power Systems (2cr)
- B EE 507 Signals and System (4cr)
- B EE 509 Engineering Simulations (2cr)

VIII. Teacher Certification

The University of Washington Bothell School of Educational Studies offers the following State approved teacher preparation programs leading to Washington State Teacher Certification.

To Become an Elementary School teacher:

- **B.A. in Educational Studies with Elementary Education Option** – combines Elementary Education Certification, a Special Education (SPED) or English to Speakers of Other Languages (ESOL) endorsement, and undergraduate baccalaureate degree – this option is appropriate for people who have not completed a bachelor's degree program and are either new students or transferring from another institution. For information, see section VI. Baccalaureate Degrees
- **K-8 Teacher Certification Post Baccalaureate Program** – this post baccalaureate program leads to Elementary Education Certification with the option of adding an endorsement in Special Education (SPED) or English to Speakers of Other Languages (ESOL) – this option is appropriate for people who have completed or nearly completed a bachelor's degree program. For information, see the following section.

To become a subject area teacher, such as Math, Science, English, or Social Studies, in Middle or High School:

- **Secondary and Middle Level Teacher Certification Master of Education degree (M.Ed.)** combines teacher certification with a subject specific endorsement and the option of adding Special Education (SPED) or English to Speakers of Other Languages (ESOL) endorsements with a Master of Education degree – this option is available upon completion of a bachelor's degree program. For information, see the following section. ***Admission to this program is paused for 2018-19. For more information, please visit our website at www.uwb.edu/education.***

K-8 Teacher Certification Post Baccalaureate Program

The UW Bothell K-8 Teacher Certification Post Baccalaureate (Postbac) Program prepares innovative, ethical practitioners who are grounded in intellectual and professional communities and who are dedicated to educating diverse students. The Program leads to a Washington State Residency Certificate with an endorsement in Elementary Education. Endorsements in Special Education or English to Speakers of Other Languages are also available.

The K-8 Teacher Certification Postbac Program integrates courses and structured field experiences.

Throughout the program, students spend over 800 hours in K-8 classrooms under the guidance of outstanding practicing teachers. From the beginning of the program, students are challenged to apply and extend what they learn in class to their work with children and youth in several school settings.

The program consists of a carefully planned and coordinated set of courses, field assignments, and reflective seminars. Faculty coordinate syllabi and the curriculum to support an integrative, holistic approach to teacher preparation that values hands-on learning experiences.

Spring, Autumn, and Winter quarters, students engage in seminars that examine the professional role of the teacher and the complexities of work in schools. Students learn innovative teaching techniques and examine issues of social justice and inclusion in the classroom.

This is a full-time, four quarter program designed for those who already or nearly hold a bachelor's degree, with the option to add a fifth quarter of coursework to complete an English to Speakers of Other Languages Endorsement or the Special Education Endorsement.

Candidacy Criteria
The ideal candidate for the K-8 Teacher Certification Postbac Program can demonstrate:

- Breadth of knowledge in English/Language Arts, Social Studies, Mathematics, Science, and Fine Arts that will prepare you to succeed in a 21st century classroom.
- Commitment to the intellectual, emotional, physical, and social growth of children in an inclusive school setting.
- Commitment to personal, intellectual, emotional, and professional growth and development.
- Commitment to learn the skills necessary to help ethnically, culturally, socioeconomically, and gender diverse student populations succeed in schools.
- Flexibility to adapt in varied, complex, and dynamic settings.
- Excellent oral and written communication skills.

Academic Requirements
To be considered for the K-8 Teacher Certification Postbac Program, applicants must have:

- A minimum grade point average of 3.0
- Passed all three sections of the WEST-B Basic Skills Tests
- A bachelor's degree from an accredited US institution or equivalent
- Documentation of a minimum of 60 hours of work with children in grades K-8. At least 30 of these hours must be in a U.S. public school classroom (K-8).
- Documentation of academic breadth. For each subject area listed below, applicants must document completed college courses, including the year taken and grades. A minimum grade of 2.0 (or grade of C) in each academic breadth course is required.
    a. Social Sciences – 2 courses from two different social science areas (e.g. U.S. History, sociology, geography, economics, political science, global studies, gender studies, etc.)
    b. English – 2 courses, 1 must be in composition and 1 can be in any area of English literature or writing.
    c. Science – 2 courses from two different science areas, 1 lab required (e.g. biology, chemistry, climate science, oceanography, geology, physics, etc.)
    d. Math - 2 courses, one should focus on Math for Teachers* and one can be in any other math area 100 level and above.
    e. Fine Arts – 1 course focusing on the creation of or practice of an area of fine art (e.g. drawing, dance, music, photography).

Curriculum
Members of the cohort complete four consecutive full time quarters of coursework beginning spring quarter and ending the following winter quarter.

Spring Quarter
B EDUC 402 Human Growth and Learning [5 cr]
B EDUC 425 Professional Practice Seminar: The Teaching Profession [2 cr]

B EDUC 409 Knowing, Teaching and Assessing in: Reading, Writing and Communicating [3 cr]
B EDUC 419 Knowing, Teaching and Assessing in: Mathematics [3 cr]
B EDUC 421 Knowing, Teaching and Assessing in: Earth, Physical and Life Sciences [4 cr]

Summer Quarter
B EDUC 403 Introduction to Special Education [5 cr]
B EDUC 417 Families, Communities and Schools [2 cr]
B EDUC 423 Knowing, Teaching and Assessing in: Health, Fitness and Issues of Abuse [3 cr]
B EDUC 441 Second Language Acquisition, Bilingual Education and the Structure of English [5 cr]
B EDUC 406 September Experience/Introduction to Field Placements [2 cr]

Autumn Quarter
B EDUC 425 Professional Practice Seminar: The Moral Classroom [2 cr]
B EDUC 435 Student Teaching [2 cr]
B EDUC 408 Knowing, Teaching and Assessing in: Multicultural Education and Social Studies [5 cr]
B EDUC 410 Knowing, Teaching and Assessing in: Reading, Writing and Communicating [4 cr]
B EDUC 418 Knowing, Teaching and Assessing in Intermediate Level Mathematics [4 cr]

Winter Quarter
B EDUC 425 Professional Practice Seminar: Reflective Practice [2 cr]
B EDUC 435 Student Teaching [10 cr]
B EDUC 442 – Curriculum, Instruction, and Assessment in ESOL (ESOL, Optional) [5 cr]
B EDUC 482 – Assessment in Special and Inclusive Education (SPED, Optional) [5 cr]

Spring Quarter (Optional)
For SPED :
B EDUC 435 – SPED Practicum
B EDUC 483 – Planning for Student Success in Inclusive Settings
B EDUC 484 – Special Education and Transitions
B EDUC 485 – Instruction in Special and Inclusive Education

For ESOL:
B EDUC 443 – Practicum ESOL
B EDUC 444 – Leadership, Advocacy, and Program Assessment in ESOL

Secondary and Middle Level Teacher Certification (M.Ed.)

Admission to this program is paused for 2018-19. For more information, please visit our website at www.uwb.edu/education.

The Secondary and Middle Level Teacher Certification M.Ed. program at the University of Washington Bothell leads to both a Master of Education degree and a Washington State Residency Certificate with an endorsement in one of the following areas:

- General Science with the option of including Biology
- English/Language Arts
- Social Studies with the option of adding History
- Mathematics.

English for Speakers of Other Languages (ESOL) or Special Education (SPED) endorsements can be added to any of these areas with additional coursework.

Program Structure
The Secondary and Middle Level Teacher Certification M.Ed. program integrates carefully planned and coordinated graduate level courses with structured field experiences, assignments and reflective seminars. Students are challenged to apply and extend what they learn in class to work with youth in high school and middle school settings.

Students attend classes two nights a week for the first three quarters (autumn, winter, and spring). Autumn quarter of the second year, they begin student teaching placements with a cooperating teaching in a middle or high school classroom. This continues through the end of winter quarter, at which time they will complete the teacher certification requirements. Spring quarter evening coursework completes the Master of Education degree requirements.

Courses
The Secondary and Middle Level Teacher Certification M.Ed. students take courses that are designed to foster their professional expertise and state-of-the art knowledge in pedagogy, curriculum, teacher leadership, multiculturalism, and cross-curricular literacy. Students have numerous opportunities to learn along with experienced teachers in M.Ed. classes including core courses of the M.Ed. Program.

All of the participants in the UW Bothell Master of Education program take three foundational courses. These courses focus on:

- Examination of research methodologies and the generation of research questions
- The use of multicultural education as a theoretical foundation for examining the ways in which students' biographical journeys, values, and beliefs influence the questions they raise and the framing of those questions.
- Organizational change and school reform as well as the responsibilities of professional leadership related to educational change.

Endorsement Area
A significant portion of the program is spent examining instruction and assessment of a primary endorsement area. Endorsement areas currently supported by the program include:

- General Science with the option of Biology
- English Language Arts
- Mathematics
- Social Studies with the option of History

Additional coursework taken during the program can lead to an English for Speakers of Other Languages (ESOL) or Special Education (SPED) endorsement.

Students also choose an elective course under the guidance of a faculty advisor. This may be selected from M.Ed. courses or from appropriate courses in other academic programs such as the UW Bothell Master of Arts in Policy Studies.

Fieldwork
Secondary and Middle Level Teacher Certification M.Ed. students spend two full-time quarters in field placements in which they have increasing curricular and instructional responsibility. Guided and supported by faculty and cooperating teachers, students will have multiple opportunities to learn, observe, and apply a variety of instructional methods and tools in different educational settings.

Curriculum
Autumn Quarter
B EDUC 501 Inquiry in Education (5 cr)
B EDUC 557 Curriculum Studies (5 cr)

Winter Quarter
B EDUC 502 Teachers' Self-Knowledge (5 cr)
B EDUC 556 Adolescent Development (5 cr)
May include up to 20 hours of community based learning (approximately 2 hours a week) in a school or other educational setting. University provides support in finding a placement with flexibility in scheduling.

Spring Quarter
B EDUC 540 Principles of Inclusion: Students and Families (5 cr)
And <u>one</u> of the following Curriculum, Instruction and Assessment (CIA) classes:
B EDUC 552 Secondary and Middle Level Science I (5 cr)
B EDUC 553 Secondary and Middle Level English, Social Studies and History (5 cr)
B EDUC 559 Secondary and Middle Level Math I (5 cr)
CIA courses may include up to 20 hours of community based learning (approximately 2 hours a week) in a school or other educational setting. University provides support in finding a placement with flexibility in scheduling.
Summer Quarter
Optional: Elective (3-5 cr)*

Autumn Quarter
B EDUC 591 Intro to Field Placement (Sept Experience) (2 cr)
Begins during the last two weeks of August as an introduction to the Field Placement
B EDUC 564 Field Experience (6 cr)

And one of the following CIA classes (students earning more than one endorsement may have to take additional Autumn CIA classes):

B EDUC 554 Secondary and Middle Level Science II (5 cr)
B EDUC 558 Secondary and Middle Level Social Studies/History (5 cr)
B EDUC 560 Secondary and Middle Level Math II (5 cr)
B EDUC 563 Secondary and Middle Level English Language Arts (5 cr)

Winter Quarter
B EDUC 565 Student Teaching (10 cr)
B EDUC 591 Professional Practice Seminar (2 cr)

Spring Quarter
B EDUC 504 Theories of Organizational Change and School Reform (5 cr)
B EDUC 594 Completion Dossier (1 cr)
Optional: Elective (3-5 cr)*

*Students are required to take at least one 3 to 5 credit elective course as part of their M.Ed. program. Electives can be chosen from graduate level Education courses on the Bothell, Seattle or Tacoma campus. Students are encouraged to take advantage of opportunities to pursue electives that supplement their learning and special interests at appropriate times during the program.

Completion Dossier
The M.Ed. Completion Dossier provides an opportunity for candidates to demonstrate comprehensive knowledge, skills, and dispositions associated with the program's overall goals for academic learning and improvement of professional practice in education. The Completion Dossier ensures breadth of academic work and application of knowledge in each candidate's work toward the M.Ed. degree, which is guided by the Education Program's goals for the degree.

The Completion Dossier contains four sections:

1. An introduction to the Completion Dossier, in which the student describes how four academic products and one application product to be presented in the dossier, taken as a whole, meet the Education Program's learning goals as elaborated in the rubric for completion dossiers
2. Four substantive academic products, normally developed in conjunction with four different graduate courses
3. One product that demonstrates application of knowledge in the student's practice in the form of the EdTPA, completed during Student Teaching
4. A reflection on their own growth as a student during the course of the program and how the contents of the Dossier reflect that growth.

Students completing their M.Ed. Dossier must register and receive credit for B EDUC 594 Completion Dossier (1 cr).

Upon successful completion of the program, graduates will have earned both a Master of Education degree and a Washington State Residency Certificate with an endorsement(s) in General Science with the option of including Biology, English/Language Arts, Mathematics, and/or Social Studies with the option of including History.

Admission Requirements
To be admitted to the Secondary and Middle Level Teacher Certification Master of Education program at the University of Washington Bothell, applicants must simultaneously be admitted to the Graduate School of the University of Washington.

Applicants must also meet the following requirements:

- Bachelor's degree from an accredited US institution or equivalent
- GPA of 3.0 or higher in the last 90 quarter credits or 60 semester credits of graded upper-division coursework
- Transcript Evaluation to ensure completion of appropriate courses in endorsement area
- 60 hours of work with secondary or middle level youth, with at least 30 hours in U.S. public high school or middle school classrooms
- Pass all three sections of the Basic Skills Test (WEST-B)
- Pass a subject test in endorsement area(s)

The required application materials are detailed on the program webpage for the Secondary Application Checklist.

Graduate School Requirements
In addition to University of Washington Bothell requirements, students must meet the following requirements to receive the master's degree:

- At least 18 numerically graded credits must be taken at the 500 level or above.
- The Graduate School accepts numerical grades (1) in approved 400-level courses accepted as part of the major, and (2) in all 500 level course work. A minimum cumulative G.P.A. of 3.0 is required.
- All work for the Master of Education degree must be completed within six years.
- For matriculated graduate students in another program, a maximum of 10 credits of graduate course work may be considered for transfer into the program based on the provisions and regulations of the Graduate School. A minimum grade of 3.0 is required for each course.
- A maximum of six credits at the graduate level may be considered for transfer into the program for non-matriculated graduate students. A minimum grade of 3.0 is required for each course.
- No courses below the 300 level will be accepted.
- For additional Graduate School requirements, see the University of Washington General Catalog.

IX. Course Descriptions

First Year and Pre-Major Program

Arabic

B ARAB 296 Study Abroad: Arabic Intermediate-level Arabic language courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. Further study at 200-level subject to placement test scores. (1-5, max. 15) VLPA

Chinese

B CHIN 101 First-Year Chinese Introduction to the standard language. Emphasis on learning correct pronunciation and basic structure. Drill in oral use of the language. Open only to students who do not have any previous training in Chinese. Offered: A. (5)

B CHIN 102 First-Year Chinese Introduction to the standard language. Emphasis on learning correct pronunciation and basic structure. Drill in oral use of the language. Open only to students who do not have any previous training in Chinese. Prerequisite: minimum grade of 2.0 in B CHIN 101. Offered: W. (5)

B CHIN 103 First-Year Chinese Introduction to the standard language. Emphasis on learning correct pronunciation and basic structure. Drill in oral use of the language. Open only to students who do not have any previous training in Chinese. Prerequisite: minimum grade of 2.0 in B CHIN 102. Offered: Sp. (5)

B CHIN 296 Study Abroad: Chinese Intermediate-level Chinese language courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. Further study at 200-level subject to placement test scores. (1-5, max. 15) VLPA

First Year and Pre-Major Program (FYPP) Bothell Core

B CORE 104 Discovery Core I: Visual, Literary, and Performing Arts Examines an important social issue such as ecology, art, political change, the power of media, educational reform, or the role of science in contemporary culture through interdisciplinary investigation, and the lens of the visual, literary, and performing arts. Offered: A. (5) VLPA

B CORE 107 Discovery Core I: Individuals and Society Through collaborative and interdisciplinary learning, students develop a knowledge base, skills, habits of inquiry, and imaginative vision. Focuses on individuals, society. Offered: A. (5) I&S

B CORE 110 Discovery Core I: Natural World Examines an important social issue such as ecology, the role of technology in society, bioethics, or global and local health concerns through interdisciplinary investigation, and the disciplined scientific study of the natural world. Offered: A. (5) NW

B CORE 115 Discovery Core II: Individuals and Society Addresses an important social issue through an interdisciplinary perspective, continues to build creative and critical skills, and focuses on the relationship between the individual and society. Offered: W. (5) I&S

B CORE 116 Discovery Core II: Natural World Addresses an important social issue through an interdisciplinary perspective; builds creative and critical skills of writing, analysis, and quantitative reasoning; and explores, through scientific methods, one aspect of the natural world. Offered: W. (5) NW, QSR

B CORE 117 Discovery Core II: Visual, Literary, and Performing Arts Examines an important social issue such as ecology, art, political change, the power of media, educational reform, or the role of science in contemporary culture through interdisciplinary investigation and the lens of the visual, literary, and performing arts. Offered: W. (5, max. 10) VLPA

B CORE 118 Discovery Core III: Individuals and Society Portfolio and Experiential Learning Evaluates progress at the conclusion of the first year through the construction of a portfolio and offers an experiential learning opportunity, either on- or off-campus. Prerequisite: B CORE 115, B CORE 116, or B CORE 117 Offered: Sp. (5) I&S

B CORE 119 Discovery Core III: Natural World Portfolio and Experiential Learning Evaluates progress at the conclusion of the first year through the construction of a portfolio and offers an experiential learning opportunity, either on- or off-campus. Prerequisite: B CORE 115, B CORE 116, or B CORE 117 Offered: Sp. (5) NW

B CORE 120 Discovery Core III: Visual, Literary, and Performing Arts Portfolio and Experiential Learning Evaluates progress at the conclusion of the first year through the construction of a portfolio and offers an experiential learning opportunity, either on- or off-campus. Prerequisite: either B CORE 115, B CORE 116, or B CORE 117. Offered: Sp. (5) VLPA

B CORE 207 Discovery Core Accelerated-Individuals & Society Orientation to UWB plus skill development in interdisciplinary analysis as students explore and critically evaluate various academic genres and sources. Students also practice skills in research and reflection. Offered: A. (5) I&S

B CORE 211 Discovery Core Special Topics For students new to UWB entering with 45+ credits, this course provides an orientation to UWB as well as skill development in interdisciplinary analysis, research and reflection. Offered: A. (2)

First Year and Pre-Major Program (FYPP)
General Education Courses

B CUSP 100 General Learning Strategies Provides students with active learning strategies and exploration of university curricular and co-curricular resources and services to help them transition into a university setting and become effective learners. Includes interactive work on building collaborative

skills, ands well as reflection on personal and academic goals. Offered: AWSp. (2, max. 6)

B CUSP 102 Transitioning to College Learning Focuses on equity and access in higher education in the current socio-political climate. Students will connect their lived experiences with current texts and social issues to better understand the educational system in the United States. Additionally, students will develop analytical and writing skills needed to succeed in college courses. Offered: A. (3) I&S

B CUSP 103 Intercultural Literacy for Multilingual Students Develops the intercultural abilities of students whose native language is not English. Students learn close reading skills and practical guidelines and strategies that can help them develop writing abilities for various genres of assignments. (3)

B CUSP 131 Special Topics in First-Year Learning Various topics designed to respond to curricular interests and needs for first-year students. (1-5, max. 15)

B CUSP 133 First-Year Interest Group Provides a range of educational experiences that are able to move both within and beyond the traditional classroom. Experiences include options such as participation in undergraduate research, community engagement, and on-campus groups organized around themes of common interest. (1-5, max. 15)

B CUSP 199 Field-Based Learning Designed for pre-majors interested in gaining hands-on work experience to access potential educational and career paths. Credit/no-credit only. Offered: WSpS. (1-3, max. 10)

B CUSP 203 Undergraduate Peer Instructor Practicum Provides instruction in group leadership and promotion of values and methods of learning within a university setting. For Peer Instructors. Credit/no-credit only. Offered: Sp. (1-3, max. 12)

B CUSP 270 Negotiation and Persuasion: Theory and Practice Examines effective negotiation techniques and prominent theories of persuasion, applying these techniques and insights in simulated negotiation. Students practice bargaining strategies, negotiate business contracts, job offers, interpersonal conflicts, consumer dispute, and ethical dilemmas. Offered: A. (5) I&S

B CUSP 295 Study Abroad Pre-Departure Seminar Prepares students for the experience of studying abroad by offering a complex look at the industry of global travel. Students also consider various approaches to "responsible travel" and reflect on ways that their own study abroad experience may both mirror and challenge the well-worn image of the "American tourist". (2) I&S

B CUSP 296 Study Abroad: CUSP CUSP related courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. (1-5, max. 15) VLPA/I&S

Japanese

BJAPAN 111 First-Year Japanese Elementary speaking, listening, reading, and writing skills in modern Japanese. Offered: AW. (5)

BJAPAN 112 First-Year Japanese Elementary speaking, listening, reading, and writing skills in modern Japanese. Prerequisite: either BJAPAN 111 or score of 6-20 on JP 100A placement test. Offered: WSp. (5)

BJAPAN 113 First-Year Japanese Elementary speaking, listening, reading, and writing skills in modern Japanese. Prerequisite: either BJAPAN 112 or score of 21-40 on JP 100A placement test. Offered: Sp. (5)

BJAPAN 211 Second-Year Japanese Development of further skills in the spoken and written languages. Students must enroll in both a lecture and quiz section to receive credit. Prerequisite: BJAPAN 113. (5) VLPA

BJAPAN 212 Second-Year Japanese Development of further skills in the spoken and written languages.

Students must enroll in both a lecture and quiz section to receive credit. Prerequisite: BJAPAN 211. (5) VLPA

BJAPAN 213 Second-Year Japanese Development of further skills in the spoken and written languages. Students must enroll in both a lecture and quiz section to receive credit. Prerequisite: BJAPAN 212. (5) VLPA

BJAPAN 296 Study Abroad: Japanese Intermediate-level Japanese language courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. Further study at 200-level subject to placement test scores. (1-5, max. 15) VLPA

Korean

BKOREA 196 Study Abroad: Elementary Korean Elementary-level Korean language and culture course taken through a UW-approved study abroad program. Further study of Korean language subject to placement test score. (1-6, max. 15)

BKOREA 296 Study Abroad: Intermediate Korean Intermediate-level Korean language and culture courses taken through a UW-approved study abroad program. Further study of Korean language subject to placement test score. (1-6, max. 15)

Leadership

B LEAD 102 Leading with Purpose: Working in Teams Develops team leader competencies needed to succeed in any leadership situation, including identifying personal strengths and challenges; connecting with other and building trust; and managing change and influencing others. Addresses current theory and research about group and team leadership and the application to teamwork. Credit/no-credit only. (2)

B LEAD 103 Leading with Purpose: People Skills Addresses fundamental people skills necessary to effectively engage with and lead others in multiple settings. Explores the importance of self-awareness and self-esteem in building relationships, the use of effective listening and non-verbal communication, the value of empathy, giving and receiving effective interpersonal feedback, and influencing positive interpersonal engagement. Credit/no-credit only. Offered: Sp. (2)

B LEAD 104 Leading with Purpose: Presentation Skills Uses creativity and practical application to help students become stronger speakers and presenters. Utilizing theatre activities and public speaking skills, students learn to be confident speakers in a variety of contexts. Offered: S. (2)

B LEAD 206 Learning to Lead: Collaboration in Diverse Contexts Explores methods of shared leadership best practices for leading oneself in diverse contexts as a foundation for leadership development. Participants work together to identify relevant issues and necessary skills, knowledge, and abilities for campus, community, and career leadership and engagement. Credit/no-credit only. Offered: AW. S. Gibson (2) I&S

B LEAD 207 Learning to Lead: Leading Others Explores methods of shared leadership best practices for leading others in diverse contexts as a foundation for leadership development. Participants work together to identify relevant issues and necessary skills, knowledge, and abilities for campus, community, and career leadership and engagement. Credit/no-credit only. S. Gibson (2) I&S

Mathematics

B MATH 121 Algebraic and Quantitative Reasoning Explores how numbers can be used to inform decisions about everyday life. Investigates numerical concepts, graphical displays, proportional relationships, equations, functions, and linear, exponential and other mathematical models. Develops conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Offered: AWSp. (5) QSR

B MATH 122 Precalculus I: Algebraic Functions Introduces functions and their multiple representations. Explores linear, quadratic, polynomial, and rational functions. Emphasis on conceptual understanding, application, and symbolic manipulation skill throughout the course. Prerequisite: either a minimum grade of 2.5 in B MATH 121, or a score of 147-150 on the MPT-GSA assessment test. Offered: AWSp. (5) QSR

B MATH 123 Precalculus II: Transcendental Functions Continuation of the study of functions. Explores exponential, logarithmic, trigonometric and inverse trigonometric functions. Emphasis will be placed on conceptual understanding, application, and symbolic manipulation skill throughout the course. Prerequisite: minimum grade of 2.5 in B MATH 122, a score of 145-153 on the MPT-AS assessment test, a score of 151 or higher on the MPT-GS assessment Offered: AWSpS. (5) NW, QSR

B MATH 127 LEARNING STRATEGIES IN MATHEMATICS Explores applications of formulas, computational skills, and interpreting certain quantities. Reviews study techniques to enhance course comprehension, and the pros and cons of the use of calculators in a math class. Credit/no-credit only. Co-requisite: either B MATH 121, B MATH 122, or B MATH 123. Credit/no-credit only. Offered: AWSpS. (1-2, max. 6)

B MATH 144 Calculus for the Life and Social Sciences Introduction to differential and integral calculus using real world applications drawn from life and social sciences, and business. Conceptual and algebraic definitions of continuity, limits, with an emphasis on polynomial, exponential, and logarithmic functions. Statement and applications of the fundamental theorem of calculus. Prerequisite: either a minimum grade of 2.0 in B MATH 123, or a score of 154-163 on the MPT-AS assessment test. Offered: AWSpS. (5) NW, QSR

B MATH 215 Statistics for Health Sciences Provides an overview of basic concepts of statistics used in health sciences with opportunities to learn through experience with health-related data. Offered: jointly with B HLTH 215. (5) QSR

Spanish

B SPAN 101 Elementary Methods and objectives are primarily oral-aural. Offered: AW. (5)

B SPAN 102 Elementary Methods and objectives are primarily oral-aural. Prerequisite: either B SPAN 101 or score of 16-44 on SP100A placement test. Offered: WSp. (5)

B SPAN 103 Elementary Methods and objectives are primarily oral-aural. Prerequisite: either B SPAN 102 or score of 45-69 on SP100A placement test. Offered: Sp. (5)

B SPAN 196 Study Abroad: Immersive Elementary Spanish Elementary-level Spanish language course taken through a UW-approved study abroad program. Explores language, culture and history in a Spanish-speaking country. (1-6, max. 15)

B SPAN 201 Intermediate Intensive practice in speaking, reading, and writing. Review of Spanish grammar. Oral practice based on literary and cultural readings. Prerequisite: either B SPAN 103, score of 70-100 on SP100A placement test, minimum score of 51 on SP TL placement test, or score of 0-75 on SP200A placement test. (5) VLPA

B SPAN 202 Intermediate Intensive practice in speaking, reading, and writing. Review of Spanish grammar. Oral practice based on literary and cultural readings. Prerequisite: either BSPAN 201 or score of 76-145 on SP200A placement test. (5) VLPA

B SPAN 203 Intermediate Intensive practice in speaking, reading, and writing. Review of Spanish grammar. Oral practice based on literary and cultural readings. Prerequisite: either B SPAN 202, or score of 146-165 on SP200A placement test. (5) VLPA

B SPAN 296 Study Abroad: Spanish Intermediate-level Spanish language courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study

abroad program. Further study at 200-level subject to placement test scores. (1-5, max. 15) VLPA

Writing

B WRIT 132 Composition Stretch I Extends B WRIT 134 over two quarters. Provides an extended experience at working with reading and writing. Must complete both B WRIT 132 and B WRIT 133 for composition graduation credit. (5)

B WRIT 133 Interdisciplinary Writing Stretch II Extends B WRIT 134 over two quarters. Provides an extended experience at working with reading and writing. Must complete both B WRIT 132 and B WRIT 133 for composition graduation credit. Prerequisite: B WRIT 132. (5)

B WRIT 134 Composition Offers an interdisciplinary approach to composition, including generating a compelling topic; the articulation of a thesis; the development of supporting evidence; the ability to draw conclusions from the evidence, clear organization of the essay, correct mechanics; awareness of audience, and knowledge of resources for research. May not be taken for credit if previously earned a minimum grade of 2.0 in ENGL 131. Offered: AWSpS. (5) C

B WRIT 135 Research Writing Strengthens performance of college-level argumentative writing and scholarly research, critical reading and thinking, and the critique and the creation of print and new media texts. Prerequisite: either B WRIT 133, B WRIT 134, or ENGL 131. Offered: AWSpS. (5) C

B WRIT 137 Writing Studio Develops strategies for improving academic writing. Focuses on interpreting assignments, developing rhetorical awareness, applying self-assessment, and improving revision. Credit/no-credit only. Offered: AWSpS. (2, max. 6)

Interactive Media Design

B IMD 233 Fundamentals of Web Media Technology Examines core concepts and technologies used to design, build, and support interactive media applications. Focuses on creating projects using media production processes and tools and applying programming constructs, incorporating text and multimedia content, and using standard formats and languages. (5) QSR

B IMD 250 Introduction to Interaction Design Introduces core concepts of human-computer interaction and design thinking through introductory theory and practice. Explores major pillars of human-centered design such as need finding; prototyping; evaluation; representations and mental models; and aesthetics. (5)

B IMD 330 Quantitative Methods in Interactive Media Emphasizes mathematical concepts and principles related to the design, production, and analysis of media applications. Areas include ethics, probability theory, statistics, data visualization, research approaches, media-specific metrics, strategies, project management/budge, on-line survey techniques, and results presentation. Offered: A. (5) QSR

B IMD 350 Designing Media Experiences - MX Looks at the design of media experiences including the visual, haptic/kinetic, and cognitive aspects of humans as they interact with a variety of forms of media. Prerequisite: B IMD 330. Offered: W. (5)

B IMD 351 Studio Elements I: Introduction Provides a survey of media design principles and technologies including characteristics of the studio process, fundamental project management and design methodologies, creativity, understanding audience, and explores user-centered design concepts. Projects linked to a series of introductory concept modules. Prerequisite: CSS 233. Offered: A. (5)

B IMD 352 Studio Elements II: Essentials Second of three studio elements courses that provides core

theory and methods related to dynamic web applications and integration with databases, photography, film production, audio techniques, and animation/storyboarding. Prerequisite: B IMD 351. Offered: W. (5)

B IMD 353 Studio Elements III Third of three studio elements courses providing core theory and methods related to advanced storyboarding, media pre-production, web technologies/base architecture, video/audio integration, and other related areas critical to interactive media. Students complete projects and begin planning for their integrative project. Prerequisite: B IMD 352. Offered: Sp. (5)

B IMD 362 Studio Elements II: Practicum Requires students to design and develop interactive media projects using design and production concept modules in an applied setting. Corequisite: B IMD 352; prerequisite: B IMD 351. Offered: W. (5)

B IMD 363 Studio Elements III: Practicum Students design and develop interactive media projects using concept modules in an applied setting. Prepares students for senior-level integrative studio and specialty-area project. Prerequisite: B IMD 353, which must be taken concurrently; B IMD 362. Offered: Sp. (5)

B IMD 390 Special Topics in Interactive Media Design Provides an opportunity to study a special topic on interactive media design. Offered: AWSpS. (5, max. 10)

B IMD 401 Study Abroad: Interactive Media Design Upper-division courses related to interactive media design, for which there are not direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. (1-5, max. 15)

B IMD 440 Systems of Digital Media Architecture Examines the components, technologies, and tools commonly used for multi-tier interactive digital media systems. Covers the design, implementation, deployment, and operational considerations for these systems such as infrastructure, software architectures, communication protocols, cloud-based systems, staging environments, usage and quality metrics, and supporting tools. Prerequisite: B IMD 352; B IMD 362. (5)

B IMD 460 Media Production Techniques Utilizes various interactive media formats and enable students to create video or animation projects and apply their video and animation materials. Evaluates processes and audience reception. (5)

B IMD 481 Integrative Studio I: Design Provides a series of design topics covering forming high-performing and innovative teams; analyzing audience characteristics such as accessibility, diversity, and global reach concerns; evaluating desirability, viability, feasibility, and sustainability; and developing comprehensive design and management artifacts for pitching and producing projects. Prerequisite: B IMD 353. Offered: A. (5)

B IMD 482 Integrative Studio II: Production Discusses contemporary concepts and methods associated with the creation of media and domain-specific contexts. Also addresses improving team skills related to decision-making, conflict, and negotiation. Prerequisite: B IMD 481. (5)

B IMD 483 Integrative Studio: Portfolio Incorporates retrospection and reflection that allows student to discuss their accomplishments and to facilitate their work to the public, and write project documentation that promotes project sustainability. Prerequisite: B IMD 482. (5)

B IMD 491 Integrative Studio Practicum I Assesses and applies multiple models of interactive media design in iterative development and integrative projects, especially in relation to an integrative project that capitalizes on the student's specialty area. Prerequisite: B IMD 363; B IMD 481, which must be taken concurrently. Offered: A. (5)

B IMD 492 Integrative Studio II: Practicum Provides application of theories and concepts related to interactive media production. Includes use of new media tools and methods that advance the

development of an integrative project. Prerequisite: B IMD 491; B IMD 482, which may be taken concurrently. (5)

B IMD 493 Integrative Studio III Practicum Provides opportunities to develop and execute relevant quality assurance studies and advance their engagement on-site with community partners who have a vested interest in their project. Structured so that students build viable links between the practicum experience and transition to work. Prerequisite: minimum grade of 2.0 in B IMD 492; B IMD 483, which may be taken concurrently. (5)

B IMD 495 Interaction Design Studio Individualized course of study in interactive media design including: user-centered design principles and aesthetic theory, creation of digital prototypes, and reflection of the design process. Students work on individual/team projects in a studio environment. Non-IMD majors only. Prerequisite: minimum grade of 2.0 in either B IMD 250 or CSS 480. (2-5, max. 15)

School of Business

Business Administration

B BUS 110 Personal Finance Examines making intelligent decisions to maximize financial resources in all phases of life. Integrates theory with real world application to analyze financial decisions and evaluate costs and benefits. (5) QSR

B BUS 120 Introduction to Social Enterprise Explores the intersection of how business principles are used to help solve societal challenges on global and local levels. Examines the history of the social sector in the U.S, global trends within the social enterprise sector, and the successes, challenges, and organizational structures of social enterprises that achieve societal goals. (5) I&S

B BUS 201 Introduction to Business Provides an overview of the entire business function. Topics may include entrepreneurship, leadership, marketing management, financial management, and technology and innovation. (5)

B BUS 210 Principles of Financial Accounting Preparation and use of accounting reports with primary focus on uses of accounting for external reporting. Understand financial statements and prepare statements that accurately present to external entities corporate financial position, operating results, cash flows, and financial strength. (5)

B BUS 211 Principles of Managerial Accounting Uses accounting information for business planning and control purposes. Focuses on internal use of accounting information and topics include cost behavior, product costing, budgeting, performance management, and responsibility accounting. Proficiency in identifying relevant information from operational and strategic decisions. Prerequisite: minimum grade of 1.7 in B BUS 210. (5)

B BUS 215 Introduction to Business Statistics Introduces descriptive statistics, probability concepts, and statistical inference emphasizing statistical applications useful in decision making and research in the social sciences. Topics include exploratory data analysis, correlation, sampling theory, estimation, hypothesis testing, and simple regression analysis. Concepts are illustrated through case problems in sociology, psychology, consumer economics, and business. (5) QSR

B BUS 220 Introduction to Microeconomics Analysis of markets: consumer demand, production, exchange, the price system, resource allocation, government intervention. Offered: jointly with BIS 200; AWSpS. (5) I&S, QSR

B BUS 221 Introduction to Macroeconomics Analysis of the aggregate economy: national income, inflation, business fluctuations, unemployment, monetary system, federal budget, international trade and finance. Prerequisite: BIS 200, B BUS 220 or B

CUSP 200. Offered: jointly with BIS 201; AWSp. (5) I&S, QSR

B BUS 230 Introduction to Business Law Introduction to the issues of business law. Covers legal resolutions, including courts, court procedures, contract law and Articles 2, 3 and 9 of the Uniform Commercial Code, business ethics, torts, and strict liability and product liability. (5) I&S

B BUS 300 Management of Organizations An introduction to management from a macro perspective. Includes leading management theories, recent case studies of world-class organizations, new research finding, and presentations by leading business executives. Co-requisite: B BSKL 300; may not be repeated. (4)

B BUS 305 Managerial Communication Focuses on the importance of written and oral communication for managerial success. Involves hands-on individual and group experience in preparing business documents and delivering business presentations. Co-requisite: B BSKL 305. (4)

B BUS 307 Business Writing Provides theoretical and practical approaches to being a better ethical writer to prepare students to be more successful in business or other organizations. (5)

B BUS 310 Managerial Economics Applies economic principles and quantitative methods to improve managerial decision making. Topics covered include: demand analysis, cost analysis, forecasting, asset valuation, information economics, government regulation of business. Prerequisite: may not be repeated. (5)

B BUS 320 Marketing Management Focuses on designing tools, concepts, and strategies for problem solving in marketing management. Prerequisite: may not be repeated. (5)

B BUS 330 Information Management and Analysis Study of the methods of gathering, structuring, analyzing and applying information in business organizations. A survey of the changes in organizations resulting from new knowledge technologies provides a framework for intensive study of a variety of tools used to gather, structure, analyze or apply information. Prerequisite: may not be repeated. (5)

B BUS 340 Operations and Project Management Examines service and manufacturing processes that deliver value to customers, introduces concepts and tools for critical analysis, emphasizes operating priorities (quality, cost, delivery, flexibility, social responsibility) an the underlying factors that support them. Prerequisite: minimum grade of 1.7 in B BUS 310; may not be repeated. (5)

B BUS 350 Business Finance Focuses on understanding the sources, uses, costs, and control of funds in business organizations. Issues include the internal management of working capital, sources of capital, financing new ventures, capital budgeting, and financing the growth of businesses. Prerequisite: minimum grade of 1.7 in B BUS 310; may not be repeated. (5)

B BUS 361 Intermediate Accounting I Examines the accounting framework and principles used to determine the income and the financial position of a firm. Develops a conceptual and applied understanding of the preparation of financial statements and processing of transactions related to the current asset accounts. Prerequisite: may not be repeated. (5)

B BUS 362 Intermediate Accounting II Analyzes current accounting theory and practices used in preparing and presenting financial statements. Focuses on the accounting treatment of transactions concerning investments; operational assets; and current and long-term liabilities. Prerequisite: minimum grade of 1.7 in B BUS 361; may not be repeated. (5)

B BUS 363 Intermediate Accounting III Analyzes current accounting theory and practices used in preparing and presenting financial statements. Focuses on the accounting treatment of transactions

that apply to stockholders' equity; income taxes; accounting changes and error corrections; retirement plans; and the statement of cash flows. Prerequisite: minimum grade of 1.7 B BUS 362; may not be repeated. (5)

B BUS 373 Cost Accounting Examines the use of accounting and operational data for internal planning and control purposes. Focus includes job-order and process costing, activity based budgeting, profit planning, responsibility accounting, standard costing and variance analysis, transfer pricing and performance evaluation systems. Prerequisite: may not be repeated. (5)

B BUS 401 Work Motivation and Performance Provides students with an understanding of the factors influencing individual motivation and performance in work environments. Includes employee attitudes and personality, goal setting and reward systems, communications, power, and conflict management, job design, and organizational culture and change. (5)

B BUS 402 Managing Work Teams Provides students with an understanding of the factors influencing team effectiveness in work environments. Includes team process, decision making, conflict resolution, team creativity, external dynamics, and emerging issues in managing teams. (5)

B BUS 411 Auditing Theory and Practice Provides intensive exposure to the attestation functions in accounting, including provisions of the Sarbanes-Oxley legislation. Analyzes the environment, process, and report of the public auditor. Discusses theory and practice related to the auditing environment, including general audit technology, programmatic applications and reporting obligations. Prerequisite: minimum grade of 1.7 in B BUS 362; may not be repeated. (5)

B BUS 412 Advanced Business Law In-depth study of legal resolutions including courts, alternative dispute resolution and ethics; creditors' rights and bankruptcy; agency and employment; corporations and securities; small business and owners limited liabilities; and government regulation of business. (5)

B BUS 421 Consumer Marketing Examines the process by which consumer goods and services are brought to the market. Analyzing existing markets to identify problems and opportunities, developing and modifying products, establishing and managing distribution, setting prices and undertaking promotional efforts, especially advertising. Emphasizes mass marketing and end users. Prerequisite: minimum grade of 1.7 in B BUS 320. (5)

B BUS 423 Market Intelligence Focuses on the major methodologies of marketing research. Deals with the entire research process, from problem definition, research design, questionnaire construction, and sample selection to data collection and analysis. Introduction to various standard and state-of-the-art data analyses techniques and software packages. Prerequisite: minimum grade of 1.7 in B BUS 320; may not be repeated. (5)

B BUS 426 International Marketing Integrated study of institutions, factors, and trends that have a bearing on global business operations and strategy. Utilizes lectures, research, case studies, guest speakers, and extensive practical application of modern marketing principles. Special emphasis on developing a marketing plan for the export of product or service. Prerequisite: minimum grade of 1.7 in B BUS 320. (5)

B BUS 427 Entrepreneurial Marketing Explores how marketing and entrepreneurship affect and are affected by one another. Examines role of marketing in entrepreneurial ventures, and the role of entrepreneurship in marketing efforts for all firms. Prerequisite: minimum grade of 1.7 in B BUS 320. (5)

B BUS 429 Special Topics in Marketing Topics of current interest to faculty and students. Offered when allowed by faculty availability and sufficient student interest. Prerequisite: minimum grade of 1.7 in B BUS 320. (5, max. 20)

B BUS 431 Electronic Marketing Critically analyze new marketing models; study how firms can effectively

leverage new technology and maximize long-term profits. Includes: web marketing strategy, e-commerce issues, channel issues, pricing models, advertising and promotion models and business plans. Prerequisite: minimum grade of 1.7 in B BUS 320. (5)

B BUS 435 Accounting Information Systems Provides in-depth coverage of accounting information systems from the perspectives of accounting transition cycles. Examines systems processes, flowcharting and internal controls relevant to each transaction processing cycles. Discusses various technologies underlying accounting information systems, including stand-alone and integrated enterprise application. Prerequisite: minimum grade of 1.7 in B BUS 361; may not be repeated. (5)

B BUS 438 Marketing Management Laboratory Capstone marketing course. Development and implementation of tactical as well as strategic aspects of marketing decisions. Integrates marketing concepts from other marketing classes to formulate coherent marketing decisions. Topics include multi-product, multi-market businesses, and challenges inherent in developing and implementing marketing decisions in a complex environment. Analysis of markets, businesses and competitive situations. Prerequisite: minimum grade of 1.7 in B BUS 320; a minimum grade of 1.7 in either B BUS 421, B BUS 423, B BUS 424, B BUS 425, B BUS 426, B BUS 427, B BUS 429, or B BUS 431; may not be repeated. (5)

B BUS 441 Business Project Management In-depth coverage of skills that prepare students for rules as business project leaders and team members. Topics include project selection, risk, definition, stakeholder analysis, communication plans, scheduling, software, resource allocation, monitoring, post-project assessment. Emphasis on critical thinking and analysis. Prerequisite: minimum grade of 1.7 in B BUS 340. (5)

B BUS 443 Entrepreneurship Seminar Creates or works within a new venture. New venture situations include for-profit and non-profit companies and launching new products/services within existing companies. Develops a business plan. Offered: jointly with CSS 473. (5)

B BUS 444 Product Development Lab Includes a technology project and product development within the dynamic of time-pressured competition. Focuses on systematically improving products to beat competition and win the customer. Topics include benchmarking, competitive intelligence, and managing small group product development. Offered: jointly with CSS 474. (5)

B BUS 445 Merchandise Acquisition Examines retail companies' merchandise acquisition practices and financial structure. Includes retail inventory management, processes of planning, and negotiating for the buying merchandise, Includes participation in a buying simulation. Prerequisite: B BUS 300; may not be repeated. (5)

B BUS 446 Strategic Retail Promotion Examines key driver, strategies, and methods necessary to succeed in retail applying advanced promotion methods to achieve competitive advantage through innovative approaches. Prerequisite: B BUS 300; B BUS 320; may not be repeated. (5)

B BUS 447 Retail Operations and Supply Chain Management Examines the fundamental of operations management in a retail setting and the operations issues faced by firms in the retail environment including blend strategic and design decision. Prerequisite: B BUS 300; may not be repeated. (5)

B BUS 448 Retail Technology and Leadership Provides exposure to new technologies in the retail industry and creates an understanding of how they can drive sales, increase efficiencies, and improve the customer experience, Includes a class project designed to integrate foundation of learning form the three previous retail course. Prerequisite: B BUS 300; B BUS 445; B BUS 446; B BUS 447; may not be repeated. (5)

B BUS 449 Accounting Practices in Not-for-Profit Organizations Examines accounting and reporting practices in governments, universities, hospitals and charitable foundations. Focuses on fund accounting fundamentals, followed by a review of current challenges in budgeting, auditing, and reporting to multiple stakeholders. Prerequisite: minimum grade of 1.7 in B BUS 363. (5)

B BUS 450 Federal Income Taxation Examines federal income tax principles that apply to gross incomes, deductions, property transactions and compensation. Equips students with the tolls to conduct basic tax research and planning. Focuses primarily on the taxation of individuals, with some exposure to corporate and partnership environments. Prerequisite: minimum grade of 1.7 in B BUS 361; may not be repeated. (5)

B BUS 451 Financial Policy and Practice Emphasizes major current theories and practices in the field of financial management. Topics include financial ratio analysis; break-even analysis; cash, marketable securities, inventory, and accounts receivable management models; dividend policy; short-term and long-term financing decisions; and international finance. Prerequisite: minimum grade of 1.7 in B BUS 350; may not be repeated. (5)

B BUS 453 Financial Institutions and Markets Role of banks and non-bank financial institutions in the financial system; asset choices of banks and non-bank financial institutions; problems in the management of financial institutions with emphasis on commercial banks. Prerequisite: minimum grade of 1.7 in B BUS 350; may not be repeated. (5)

B BUS 454 Investments Introduction to the nature, problems, and process of evaluating particular securities and portfolio construction and administration. Special attention is directed to the risk and rate of return aspects of particular securities portfolios; and total wealth. Prerequisite: minimum grade of 1.7 in B BUS 350; may not be repeated. (5)

B BUS 455 Financial Risk Management Introduction to the field of derivative securities, focusing in particular on futures, forwards, and options. Pays special attention to the use of derivative securities in the management of risk and the general principles underlying the pricing of derivative securities. Prerequisite: minimum grade of 1.7 in B BUS 454. (5)

B BUS 456 Entrepreneurial Finance Examines financial challenges common to new ventures, and discusses each participate in the venture arena. Explores alternative sources of private equity for new ventures. Prerequisite: minimum grade of 1.7 in B BUS 350. (5)

B BUS 457 Advanced Valuation Focuses in the use of the primary valuation models and the issues faced when valuing public and private companies. These include determining the cost of capital estimate; developing cash flow projections; evaluating investment complications, such as taxes, inflation and competitive and economic risks, and adjusting models to reflect the different maturity stages of companies. Prerequisite: minimum grade of 1.7 in B BUS 454. (5)

B BUS 459 Special Topic in Finance Study and research topics of current concern to faculty and to students pursuing the finance concentration. Prerequisite: minimum grade of 1.7 in B BUS 350. (5)

B BUS 460 Sustainable Business Explores the critical challenges facing business when becoming more environmentally sustainable without forgoing traditional indicators of success. Topics involve elements of strategy, marketing, manufacturing and technology, finance, organization theory, and accounting and draw from current major concerns related to environment and sustainability, such as climate, toxins, and food. (5)

B BUS 461 Business, Government, and Society Covers capitalism and its critics; corporate social responsibility and business ethics; government and politics; regulation business; stakeholders and interest groups; the role of technology and the future

of business. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300; minimum grade of 1.7 in B BUS 310. (5)

B BUS 462 Negotiations and Conflict Management Explores creative, integrative approaches to conflict resolution. Bargaining games, role-plays, cases, issues in conflict management, interpersonal influence processes, ethical implications of bargaining problems and personal negotiating styles. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300; minimum grade of 1.7 in B BUS 320. (5)

B BUS 463 Advanced Financial Accounting Covers advanced accounting topics related to consolidated financial statements; accounting for derivatives and hedging activities, and the translation of financial statements prepared in a foreign currency. Prerequisite: minimum grade of 1.7 in B BUS 362. (5)

B BUS 464 New Product Marketing Focuses on the process of New Product Marketing. Examines the contemporary practices of market development as it complements new product development. Emphasis given to understanding customer value, its measurement and relationship to new product design. Practical exposure through focused homework, student projects, and case studies. Prerequisite: minimum grade of 1.7 in B BUS 320. (5)

B BUS 465 Applied Financial Accounting Emphasizes what analysts and managers need to know about the issues and procedures involved in the preparation of the financial statement, rather than on the actual preparation of the statements. Prepares students for professional certification as management accountants or financial analysts. Prerequisite: minimum grade of 1.7 in B BUS 350. (5)

B BUS 466 Applied Managerial Accounting Examines the principles of management accounting and the tools and techniques used to prepare and disseminate management accounting reports. Prepares students for professional certification as management accountants or financial analysts. Prerequisite: minimum grade of 1.7 in B BUS 350. (5)

B BUS 467 Advanced Taxation Examines issues of taxation for entities other than individuals, including corporation, subchapter S corporations, partnerships, estates, and trusts. Includes corporate distributions, liquidations, and reorganizations. Prerequisite: minimum grade of 1.7 in B BUS 450. (5)

B BUS 470 Business Policy and Strategic Management Capstone course. Focuses on identification, analysis and resolution of managerial problems; creation and implementation of management policies in business organizations; and revision of policies over time. Prerequisite: minimum grade of 1.7 in B BUS 300; minimum grade of 1.7 in B BUS 307; B BSKL 300; minimum grade of 1.7 in B BUS 320; minimum grade of 1.7 in B BUS 340; minimum grade of 1.7 in B BUS 350; may not be repeated. (5)

B BUS 471 Entrepreneurial Management Focuses on the processes of entrepreneurship within an organization, including how to create products and services which add value to consumers, how to start and nurture a new business venture, and how to develop and sustain innovation within existing organizations. (5)

B BUS 472 Managing Employees Focuses on how companies are succeeding through innovative human-resource practices and on the steps that managers can take to overcome barriers to change in order to meet the challenges of today and the future. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300; may not be repeated. (5)

B BUS 473 Leadership and Decision Making The manager is seen as a business leader and decision-maker. Covers various individual and group-level decision-making models. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300; may not be repeated. (5)

B BUS 475 Managing Innovation Examines topics such as the nature of innovation, technology strategy, organizational and technical capabilities, and new product development processes. Course requirements typically include readings, case

analyses, classroom discussion, and research project(s). Open to Business or CSS students having senior status. Prerequisite: may not be repeated. (5)

B BUS 476 New Technology and Future Markets Examines the business dynamics of technological revolutions. The primary objective is to help managers critically analyze the potential impacts of upcoming "leading edge" technologies on their industry sector. Students engage in forecasting a high technology sector. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300; minimum grade of 1.7 in B BUS 320; minimum grade of 1.7 in B BUS 350; may not be repeated. (5)

B BUS 477 Human Resource Management Provides an introduction to the strategic role of the Human Resource function within modern organizations. Examines HR management practices associated with individual and organizational effectiveness, employee satisfaction and motivation; develops an understanding of how general managers can apply these concepts in dealing with their employees. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300. (5)

B BUS 479 Special Topics in Management Topics of current interest to faculty and students. Offered when allowed by faculty availability and sufficient student interest. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300. (5, max. 20)

B BUS 480 Global Environment of Business Focuses on the major changes and issues facing businesses and managers operating in an increasingly global environment. Emphasizes topics such as trade policy, accelerating advances in technology, the changing nature of the work force, and societal expectations of business. Problems and issues from the perspective of directing the entire business enterprise. Prerequisite: minimum grade of 1.7 in B BUS 300; minimum grade of 1.7 in B BUS 307; B BSKL 300; minimum grade of 1.7 in B BUS 320; minimum grade of 1.7 in B BUS 340; minimum grade of 1.7 in B BUS 350; may not be repeated. (5)

B BUS 482 Introduction to Supply Chain Management Introduces basic supply chain management concepts, as well as strategic and design decisions faced by service and manufacturing organizations. Provides an overview of the supply chain architecture and discusses various aspects of managing inventory, sourcing relationships, revenue management, performance management, and supply chain information systems. Prerequisite: minimum grade of 1.7 in B BUS 340; recommended: Operations Management (5) QSR

B BUS 486 Supply Chain Resource Planning Introduction to the design and control of production functions. Focuses on the principles, models, and techniques for resource planning, analysis, and design of integrated production control systems. Topics include forecasting, inventory management, production planning, scheduling, and materials requirement planning problems. Prerequisite: minimum grade of 1.7 in B BUS 340; recommended: Operations management. (5) QSR

B BUS 487 Managing and Improving Supply Chain Processes (Capstone) Integrates the topics covered in the foundational Supply Chain Management courses as well as engage students in topics related to managing and improving supply chains. Analyze a real-world supply chain problem and develop viable solutions. Prerequisite: minimum grade of 1.7 B BUS 483 and B BUS 441; recommended: Operations management and supply chain management. (5)

B BUS 489 Digital Business Lab MIS concentration capstone. Provides a broad understanding of the impact of information technology on the corporation. Uses various learning tools such as case studies, portfolios, site visits, visiting speakers, and term papers. Prerequisite: minimum grade of 1.7 in B BUS 330; B BSKL 300; minimum grade of 1.7 in CSS 341; minimum grade of 1.7 in CSS 360; may not be repeated. (5)

B BUS 490 Special Topics in Business Topics of current interest to faculty and students. Offered when allowed by faculty availability and sufficient student

interest. Prerequisite: minimum grade of 1.7 in B BUS 300; B BSKL 300; minimum grade of 1.7 in B BUS 310. (5, max. 20)

B BUS 491 Business Consulting Applies principles and methods of consulting to organizations. Teams work as consultants for local businesses, applying management theory and concepts to develop strategic and tactical solutions to client-driven problems involving multiple functions. (5)

B BUS 497 Guided Internship A significant research project planned and carried out by the student under the direction of one or more faculty. (1-10, max. 10)

B BUS 498 Directed Readings A significant research project planned and carried out by the student under the direction of two or more faculty. (3-5, max. 15)

B BUS 499 Undergraduate Research Individual advanced research on topics related to business issues and conducted under the direction of one or more instructors. (1-5, max. 15)

B BUS 500 Quantitative Business Methods Reviews fundamental concepts of differential calculus, descriptive statistics and probability theory, emphasizing applications most useful in modeling business problems. Topics include differentiation and optimization, descriptive statistics, measures of association, probability concepts, decision analysis and discrete and continuous probability distributions. Concepts are illustrated through case problems in business. Credit/no-credit only. Offered: S. (2)

B BUS 501 Leadership, Team Process and Decision Making: A Workshop Examines factors associated with leader and team effectiveness using high- and low-element exercises and lecture/discussion. Introduces management analysis and decision-making using the case study method. Three-day off-campus retreat followed by two evening class meetings on campus. Credit/no-credit only. Offered: A. (4)

B BUS 502 Statistics for Business Reviews descriptive statistics, exploratory data, and probability distributions. Studies the theory and methods of statistical inference, emphasizing those applications most useful in modeling business problems. Topics include sampling theory, estimation, hypothesis testing, linear regression, analysis of variance, and several advanced applications of the general linear model. Offered: A. (4)

B BUS 503 Financial Reporting and Analysis Read, interpret, and analyze company financial reports. Understand the procedural aspects of the preparation of financial statements. Acquire a working knowledge of generally accepted accounting principles and financial reporting standards. Understand the ambiguities that arise in preparing financial statements and the role of good business judgment in resolving these ambiguities. (4)

B BUS 504 MICROECONOMICS FOR BUSINESS Considers some of the most important economic aspects of a business enterprise including demand and cost analysis, pricing strategy (including auctions), and the economics of information. Highlights the usefulness of game theory. Offered: W. (4)

B BUS 505 Financial Management Provides an introduction to the models used in the investment and financing decisions of a firm. Topics include: valuation of stocks and bonds; measurement of risk and return; project evaluation and analysis; financial leverage and optimal capital structure, and optimal dividend policy. Prerequisite: B BUS 503; B BUS 504. Offered: Sp. (4)

B BUS 506 Marketing Management Facilitates the development of a customer orientation and explores the use of the marketing mix of product, price, place and promotion to create, communicate and deliver value to targeted customer segments. Explains how marketing strategy is developed, implemented, and controlled in the marketplace. Prerequisite: B BUS 504. Offered: Sp. (4)

B BUS 507 Global Business Synthesizes and extends perspective on global business environment.

Demonstrates how choices related to organization and strategy (such as outsourcing and diversification) require an understanding of trade theory and policy, differences in national cultures, and international institutions. Prerequisite: B BUS 504; B BUS 505; B BUS 506. Offered: Sp. (4)

B BUS 508 Business Law and Ethics Provides an understanding of the impact of legal considerations on managerial decision making. Topics include anti-trust law, intellectual property law, consumer protection and investor protection. Offered: W. (4)

B BUS 509 Operations Management Examines the operations function in service and manufacturing organizations from a managerial perspective. Key topics include strategic and design decisions relating to operations and processes, quality management, lean systems, inventory control and supply chain management. Uses blend of theory, cases, analytical techniques, and business vignettes. Prerequisite: B BUS 505; B BUS 506 Offered: A. (4)

B BUS 510 Managing Organizational Effectiveness Explores intangible assets and "meso" issues that underpin organizational effectiveness. Topics include organizational phenomena (cultures, structures, routines, capabilities, life cycles), intellectual capital, and knowledge management (creating, maintaining, and diffusing knowledge). Projects require application of best practices to personally relevant situations. Offered: Sp. (4)

B BUS 512 Strategic Management Focuses on major top management decisions, emphasizing how competitive advantage is created and maintained through planning and strategy. Using readings and cases, demonstrates importance in diverse industries of external environments (customers, competitors, science and technology, laws), organizational phenomena (structure, processes, decision making), and an international perspective. Offered: A. (4)

B BUS 514 Business Communications for Leaders Focuses on making written and spoken communications effective and authentic, using case studies of several communication challenges that occur in organizations. Teaches how successful communication is both intentional and strategic; and how to formulate communication goals, understand your audience, and use the correct approach in each situation. Offered: S. (4)

B BUS 521 Enterprise IT Management Focuses on critical issues for aligning information technology resources with the enterprise. Demonstrates the role of company mission and objectives on decisions regarding project approval and implementation. Topics include: project due diligence; technology process management; technology agility; enterprise system implementation, legal and ethical aspects, and contemporary issues. Offered: S. (4)

B BUS 522 Organizational Behavior Improves student's effectiveness as managers and leaders. Introduces frameworks for understanding organizational processes. Includes a one-day, overnight retreat to help second-year students to reflect on their experiences, and examine progress toward their development goals to enhance success during the second year. Prerequisite: B BUS 501. Offered: A. (4)

B BUS 524 Creativity and Innovation Management Provides senior management perspective and analytical frameworks for managing creativity and innovation to achieve strategic goals and objectives. Topics include the language of innovation, use of lateral thinking and group collaboration techniques to create breakthrough new ideas, and building innovation eco-systems through integration of strategy, process, organization, and technologies. (4)

B BUS 525 Technology and Innovation Management Provides a general manager's perspective on the management of innovation. Focuses on conceptual frameworks and analytical tools for managing innovation throughout the firm. Topics include the nature of innovation, how organizational and technical capabilities affect innovation, product/process development systems, and technology implementation. Offered: W. (4)

B BUS 526 Entrepreneurship Practicum Focuses on providing immersive real-life experiences that require application of fundamental business principles. Students in the "new venture" track make a trial presentation to practitioners at the quarter's end. Students in the "live case" track meet pre-established and agreed-upon goals. Offered: W. (4)

B BUS 527 Entrepreneurial Marketing Explores how marketing and entrepreneurship affect and are affected by one another. Examines role of marketing in entrepreneurial ventures, and the role of entrepreneurship in marketing efforts for all firms. (4)

B BUS 528 New Product Marketing Examines strategies and state-of-the art analytical methods that support profitable new product introductions. (4)

B BUS 531 Leadership and Social Responsibility Focuses on leadership and managerial effectiveness. Builds upon students' knowledge of factors which influence leadership behavior and the critical personal and interpersonal associated with leadership. At a two-day, overnight retreat, students engage in an organizational simulation and receive feedback from faculty and mentors. Prerequisite: B BUS 501. Offered: A. (4)

B BUS 533 Advanced Leadership Models Provides an advanced overview of leadership theory and practice and helps students understand and develop their own leadership potential. Relies on a variety of approaches including readings, cases, simulations, guest speakers, activities, discussion, assessments, lectures, and reflection. (4)

B BUS 534 Human Resource Management Provides an introduction to the strategic role of the human resource function within modern organizations; examines human resource management practices associated with individual and organizational effectiveness, employee satisfaction, and motivation; and develops an understanding of how general managers can apply these concepts in managing people within their organizations. (4)

B BUS 535 Advanced Marketing Simulation Laboratory Develops and evaluates marketing strategies and tactics for multi-product multi-market organizations. Expands knowledge through hands-on simulation. Discusses strategies for market entry, innovation, pricing, and brand repositioning. Examines diffusion of innovation models and analytical methodologies for evaluating and implementing marketing strategy such as conjoint analysis. Prerequisite: minimum grade of 2.7 in B BUS 506. (4)

B BUS 539 Market Intelligence Focuses on understanding design, data analysis techniques, and interpretation of market segmentation studies, customer satisfaction studies, user experience studies, product positioning research, and recommender system. Students have hands-on experience designing research projects and deriving marketing insights from various data analysis exercise and projects. Prerequisite: B BUS 502. (4)

B BUS 541 Advanced Corporate Finance Reviews basic financial concepts and introduces more advanced financial tools. Uses case analysis to confront the complexities of real-world financial situations. Students work to identify relevant issues necessary to address the financial problems raised in cases. Prerequisite: B BUS 505. Offered: S. (4)

B BUS 542 Customer Satisfaction Models Examines the role of customer satisfaction in a market economy; how information on customer satisfaction can be used to understand the economy, to help investment decisions, and to improve business management. Theoretical objectives include broadening the pre-purchase and post-purchase decision-making focus into the consumption and post-consumption areas. Offered: S. (5)

B BUS 543 Investments Examines various types of investment securities and derivatives, the mechanics of security markets, the relationship between risk

and return, and the distinction between fundamental and technical analysis. Prerequisite: B BUS 505. Offered: S. (4)

B BUS 544 Negotiations Examines the theory and processes of negotiation. Includes a broad spectrum of negotiation problems. (4)

B BUS 546 Seminar on Global Economic Issues Analyzes economic structures and trends in nations across the globe and examines their implications for business decision-making. Examines how these economies are influenced by political, legal, regulatory, and technological issues in a global context. Offered: S. (4)

B BUS 549 Management Consulting A project-based applied learning practicum focused on introducing students to the field of management consulting. Designed to serve an integrative role, bringing together the functional disciplines and components of the MBA curriculum in a summative project-based consulting experience. (4)

B BUS 556 Entrepreneurial Finance Examines financial challenges common to new ventures, and discusses each participant in the venture arena. Explores alternative sources of private equity for new ventures. (4)

B BUS 558 Corporate Financial Reporting Using critical thinking skills, students develop professional judgment in evaluating corporate general purpose financial reporting. Through case studies, readings, and exercises, students build knowledge and skills for creating and using financial reports, particularly around long-term business arrangements. Students learn to document and clearly communicate their analysis. (4)

B BUS 560 Sustainable Business Explores the critical challenges facing businesses in becoming more environmentally sustainable without forgoing traditional indicators of success. Topics drawn from current major concerns related to environment and sustainability, such as climate, water, toxics, transportation, buildings, and food. Application of economics, strategy, marketing, manufacturing and technology, finance, organization theory, and accounting. (4)

B BUS 590 Special Topics for MBA Study Topics of interest Business faculty and students. Offered when allowed by faculty availability and sufficient student interest. (1-4, max. 32)

B BUS 591 Global Business Study Tour Study abroad tour that cultivates a rich understanding of business theory and a genuine global perspective. Develops an appreciation of national difference in culture and economic, legal, and political systems that affect business strategy, operations, and performance. ([1-10]-, max. 10)

B BUS 600 Independent Study or Research Independent study or research on business topics conducted under the direction of one or more instructors. Offered: AWSpS. (1-4)

B BUS 601 Internship Provides a circumscribed practical experience at an organization under the supervision of a faculty member. Credit/no-credit only. Offered: AWSpS. (1-6, max. 12)

Business Administration Accounting

B ACCT 501 Accounting Theory Focuses on the basic market paradigm that governs accounting and accounting institutions. Uses concepts such as agency theory, permanent income, and Hicksian income. Explores issues such as the use of book value and earnings as alternative anchors and the need for disclosure versus accounting. (4)

B ACCT 502 Seminar on Financial Accounting Introduces the basic wisdom derived from financial accounting research. Starting with the efficient market paradigm, students are exposed to the concept of value relevant information of market participants and the role of accounting information. Case studies/ journal articles examine the current dilemmas/controversies in financial accounting. (4)

B ACCT 503 Corporate Financial Reporting Combines ideas and tools from economics, statistics, decisions theory, and finance with traditional accounting concepts such as faithful representation to develop a general framework for general purpose financial reporting. (4)

B ACCT 504 Advanced Managerial Accounting Exposes student to the user's perspective of managerial accounting information, incorporating uncertainty and fully exploiting the interrelationship between cost determination, performance evaluation, and economic decision making. Focuses on the underlying theory of cost allocation as an applied mechanism design and incentive issues arising with cost management/control practices. (4)

B ACCT 505 Financial Statement Analysis Students analyze actual financial statements with a view to valuing a firm form the valuation fundamentals and comparing their findings to actual market valuations. Stretches students' ability to apply knowledge and skills developed in prior courses to perform challenging real-world tasks. Prerequisite: B ACCT 501; B ACCT 503. (4)

B ACCT 506 Seminar on Strategic Cost Management Aims to introduce students to how cost information can be used to create and support business strategy and how the existing cost accounting systems need to be adapted for strategic use. Prerequisite: B ACCT 504. (4)

B ACCT 510 Accounting Profession Based on participation in accounting-related seminars, workshops, symposia, and field trips. These "qualifying events" help students to understanding the demands and nature of the accounting profession; apply accounting theory and principles as needed in professional conversations; and explores the ethical dimensions of professional decision making. Credit/no-credit only. ([0-1]-, max. 1)

B ACCT 512 Advanced Business Law Provides introduction to legal resolutions including courts, alternative dispute resolution, and ethics; creditors' rights bankruptcy; agency and employment; corporations and securities; small businesses and owners limited liabilities; and government regulation of business. (4)

B ACCT 520 Accounting Valuation Introduces basic theories and practical applications of accounting valuation methods. Students study basic concepts of accounting valuation models, evaluation accounting information to apply methods, analyze, and interpret profitability of a business. (4)

B ACCT 563 Advanced Financial Accounting Covers advanced accounting topics related to consolidated financial statements; accounting for derivatives and hedging activities; and the translation of financial statements prepared in a foreign currency. (4)

B ACCT 567 Advanced Taxation Provides an analysis and evaluation of the federal income tax consequences affecting Corporations, Partnerships, and LLCs. Provides an introduction to entity tax accounting with emphasis on both tax consequences and tax planning. (4)

Business Economics

B BECN 302 Intermediate Microeconomics Intermediate level analysis of theories of household behavior (demand for consumer goods, labor supply, and savings decisions) and producer behavior (supply of output, demand for labor and capital). Various notions of equilibria in competitive and noncompetitive markets are introduced, and their welfare properties are discussed. Prerequisite: B BECN 300 (5)

B BECN 382 Introduction to Econometrics Introduces students to basic econometric tools and provides a background to apply statistical analysis to economic data, quantifying causal effects of economic relationships. It combines theory with hands-on experience in econometric modeling, emphasizing empirical applications to data and real-world problems. Prerequisite: B BECN 300 (5) QSR

Business Skills

B BSKL 200 Preparing for the Business World Examines professionalism, productivity, communication, networking, and career management. Develops skills for business case analysis, project planning and management, public speaking, writing, team work, and introspection. Credit/no-credit only. (5)

B BSKL 300 Business Team Skills Introduces students to the characteristics of effective teams, team processes, stages of group development, leadership behaviors, meeting management, and team performance diagnosis. Must be taken concurrently with B BUS 300, Management of Organizations. Credit/no-credit only. Offered: AW. Collins, Kelley, Walters (1)

B BSKL 305 Business Research Skills Familiarize students with analytical reasoning and research methods, the case method of teaching, and group writing skills. Provides students with the tools necessary to succeed in the UWB Business Program. Must be taken concurrently with B BUS 305, Managerial Communication. Credit/no-credit only. Offered: AW. Kelly, Miller (1)

Eastside Learning Center - Business

ELCBUS 210 Principles of Financial Accounting Preparation and use of accounting reports with primary focus on uses of accounting for external reporting. Understand financial statements and prepare statements that accurately present to external entities corporate financial position, operating results, cash flows, and financial strength. (5)

ELCBUS 211 Principles of Managerial Accounting Uses accounting information for business planning and control purposes. Focuses on internal use of accounting information and topics include cost behavior, product costing, budgeting, performance management, and responsibility accounting. Develops proficiency in identifying the relevant information for making operational and strategic decisions. Prerequisite: either ELCBUS 210 or B BUS 210. (5)

ELCBUS 215 Introduction to Business Statistics Introduces descriptive statistics, probability concepts, and statistical inference emphasizing statistical applications useful in decision making and research in the social sciences. Topics include exploratory data analysis, correlation sampling theory, estimation, hypothesis testing, and simple regression analysis. Concepts are illustrated through case problems in sociology, psychology, consumer economics, and business. (5) QSR

ELCBUS 300 Management of Organizations Introduces management from a macro perspective. Includes leading management theories, recent case studies of world-class organizations, new research finding, and presentations by leading business executives. (5)

ELCBUS 301 Business Statistics Examines statistical methods useful in modeling business problems. Topics include exploratory data analysis and the visual representation of data, probability distributions, statistical inference (sampling theory, estimation, hypothesis testing), and multiple regression models. Concepts illustrated through case problems and the intensive sue of statistical software. (5) QSR

ELCBUS 305 Managerial Communication Focuses on the importance of topics such as written and oral communication for managerial success. Involves hands-on individual and group experience in preparing business documents and delivering business presentations. (1-2, max. 5)

ELCBUS 310 Managerial Economics Applies economics principles and quantitative methods to improve managerial decision making. Topics include demand analysis, cost analysis, forecasting, asset valuation, information economics, and government regulation of business. Prerequisite: minimum grade of 1.7 in ELCBUS 301. (5)

ELCBUS 320 Marketing Management Focuses on designing tools, concepts, and strategies for problem solving in marketing management. (5)

ELCBUS 330 Information Management and Analysis Examines core technologies vital to enterprise information technology management. Topics include architectural considerations in high tech enterprises, internet tools, and enterprise resource planning systems. ([2/3]-, max. 5)

ELCBUS 340 Operations and Project Management Examines service and manufacturing processes that deliver value to customers, introduces concepts and tools for critical analysis, and emphasizes operating priorities (quality, cost, delivery, flexibility, social responsibility) including the underlying factors that support them. Prerequisite: minimum grade of 1.7 in ELCBUS 310. (5)

ELCBUS 350 Business Finance Focuses on understanding the sources, uses, costs, and control of funds in business organizations. Issues include the internal management of working capital, sources of capital, financing new ventures, capital budgeting, and financing the growth of businesses. Prerequisite: minimum grade of 1.7 in ELCBUS 310. (5)

ELCBUS 380 Introduction to Organizational Behavior Examines frameworks and models for understanding the factors that influence the effectiveness of individuals, teams, and organizations. Topics include employee motivation, leadership, team dynamics, communication, and organizational culture and change. (5)

ELCBUS 382 Business, Government, and Society Examines relationships among business, government, and civil society. Emphasizes perspectives and interests of each sector as to economic, social, and environmental goals. Addresses business ethics and corporate social responsibility. Includes intensive writing and revision, with emphasis on logical and persuasive support of recommendations and positions. (5)

ELCBUS 400 Business Project Management Provides in-depth coverage of skills that prepare students for rules as business project leaders and team members. Topics include project selection, risk, definition, stakeholder analysis, communication plans, scheduling, software, resource allocation, monitoring, post-project assessment. Emphasizes critical thinking and analysis. Prerequisite: minimum grade of 1.7 in ELCBUS 340. (5)

ELCBUS 401 Electronic Marketing Critically analyze new marketing models; study how firms can effectively leverage new technology and maximize long-term profits. Includes: web marketing strategy, e-commerce issues, channel issues, pricing models, advertising and promotion models, and business plans. Equivalent to B BUS 431. Prerequisite: minimum grade of 1.7 in ELCBUS 320. (5)

ELCBUS 402 Leadership and Decision Making The manager is seen as a business leader and decision-maker. Covers various individual and group-level decision-making models. Prerequisite: minimum grade of 1.7 in ELCBUS 300. (5)

ELCBUS 403 Negotiations and Conflict Management Explores creative, integrative approaches to conflict resolution. Includes bargaining games, role-plays, cases, issues in conflict management, interpersonal influence processes, ethical implications of bargaining problems, and persona negotiating styles. Equivalent to B BUS 462. Prerequisite: minimum grade of 1.7 in both ELCBUS 300 and ELCBUS 320. (5)

ELCBUS 441 Essentials of Venturing Provides an overview of the new venture creation process including business formation, growth, and innovation. Introduces forms of entrepreneurship, methods of acquiring human capital, the idea generation processes, networking, intellectual property protection, as well as types and sources of funding. (5)

ELCBUS 442 New Venture Ideas Focuses on the basics of new product development and marketing. Provides an understanding of the importance of the

integration of design, manufacturing, and marketing processes. Prerequisite: minimum grade of 1.7 in ELCBUS 441. (5)

ELCBUS 443 Venture Feasibility Analysis Focuses on methods to evaluate and obtain control over opportunities that can be exploited by staring new companies. Prerequisite: ELCBUS 442, which may be taken concurrently (5)

ELCBUS 444 Venture Start-up, Management and Growth Focuses on the opportunity and challenge of managing and growing of start-ups. Emphasizes understanding of the processes managing growth and effectively dealing with the growing pains. Prerequisite: minimum grade of 1.7 on ELCBUS 443. (5)

ELCBUS 451 Financial Policy and Practice Emphasizes major current theories and practices in the field of financial management. Topics include financial ratio analysis; break-even analysis; cash, marketable securities, inventory, and accounts receivable management models; dividend policy; short-term and long-term financing decisions; and international finance. Prerequisite: minimum grade of 1.7 in ELCBUS 350. (5)

ELCBUS 453 Financial Institutions and Markets Role of banks and non-bank financial institutions in the financial system; asset choices of banks and non-bank financial institutions; problems in the management of financial institutions with emphasis on commercial banks. Prerequisite: minimum grade of 1.7 in ELCBUS 350. (5)

ELCBUS 454 Investments Introduction to the nature, problems, and process of evaluating particular securities and portfolio construction and administration. Special attention is directed to the risk and rate of return aspects of particular securities portfolios; and total wealth. Prerequisite: minimum grade of 1.7 in ELCBUS 350. (5)

ELCBUS 455 Financial Risk Management Introduction to the field of derivative securities, focusing in particular on futures, forwards, and options. Pays special attention to the use of derivative securities in the management of risk and the general principles underlying the pricing of derivative securities. Prerequisite: minimum grade of 1.7 in ELCBUS 454. (5)

ELCBUS 461 International Environment of Business Focuses on major changes and issues facing businesses and managers operating in an increasingly global environment. Emphasizes topics such as trade policy, technological advances, the changing nature of the work force, and societal expectations of business. Prerequisite: minimum grade of 1.7 in ELCBUS 310. (5)

ELCBUS 462 International Marketing Integrated study of institutions, factors, and trends that have a bearing on global business operations and strategy. Utilizes lectures, research, case studies, guest speakers, and extensive practical application of modern marketing principles. Special emphasis on developing a marketing plan for the export of product or service. Prerequisite: ELCBUS 320. (5-)

ELCBUS 463 International Finance and Trade Covers key topics in financial management including management of foreign exchange exposure, foreign direct investment decisions, multinational capital budgeting, balance of payments, determination of exchange rates, and the role and tools of banks in international trade. Prerequisite: minimum grade of 1.7 in ELCBUS 350. (5)

ELCBUS 464 History and Globalization Examines the process of globalization from a historical perspective and applies a systems theory framework based on the insights of modern science to enhance understanding of the process. (5)

ELCBUS 470 Business Policy and Strategic Management Focuses on identification, analysis, and resolution of managerial problems; creation and implementation of management policies in business organizations; and revision of policies over time. Prerequisite: a minimum grade of 1.7 in each of

ELCBUS 300; ELCBUS 320; ELCBUS 340; and ELCBUS 350. (5)

ELCBUS 482 Introduction to Supply Chain Management Introduces basic supply chain management concepts, as well as strategic and design decisions faced by service and manufacturing organizations. Provides an overview of the supply chain architecture and discusses various aspects of managing inventory, sourcing relationships, revenue management, performance management, and supply chain information systems. Prerequisite: minimum grade of 1.7 in ELCBUS 340; recommended: Operations Management (5) QSR

ELCBUS 486 Supply Chain Resource Planning Introduction to the design and control of production functions. Focuses on the principles, models, and techniques for resource planning, analysis, and design of integrated production control systems. Topics include forecasting, inventory management, production planning, scheduling, and materials requirement planning problems. Prerequisite: minimum grade of 1.7 in ELCBUS 340; recommended: Operations management. (5) QSR

ELCBUS 487 Managing and Improving Supply Chain Processes (Capstone) Integrates the topics covered in the foundational Supply Chain Management courses as well as engage students in topics related to managing and improving supply chains. Analyze a real-world supply chain problem and develop viable solutions. Prerequisite: minimum grade of 1.7 ELCBUS 483 and ELCBUS 400; recommended: Operations management and supply chain management (5)

ELCBUS 497 Guided Internship A significant research project planned and carried out by the student under the direction of one or more faculty. (1-10, max. 10)

ELCBUS 499 Undergraduate Research Individual advanced research on topics related to business issues and conducted under the direction of one or more instructors. (1-5, max. 15)

School of Educational Studies

Education

B EDUC 205 Education and Equity in the U.S. Introduces historic and contemporary struggles over issues of equity in U.S Education system. Examines issues of race, gender, and religion, evaluating positions of various stakeholders and identifying strategies used to move towards equity in U.S education. Offered: A. (5) I&S, DIV

B EDUC 210 Teaching and Learning in a Multicultural Society Examines how race and ethnicity intersect with class, gender, sexual orientation, language, disability, and citizenship to influence school experiences and provide insights for culturally relevant teaching. Explores social, cultural, political, and economic issues impacting communities and ways they are implicated in systems of power and privilege that influence educational opportunities. Offered: W. (5) I&S, DIV

B EDUC 220 Education and Society Examines educational problems, policy, and practice from interdisciplinary perspective. Explores the tensions between education values and goals throughout the history of public schooling in the United States and develops critical perspectives through which to evaluate current proposals for school reform. Offered: ASp. Joseph (5) I&S

B EDUC 230 Culture, Knowledge, and Education Explores the intersection of culture, knowledge, and education. Examines each concept separately then focuses on ways they interact and affect educational opportunities. Cultural issues include; race, socio-economic histories, language, gender, sexual orientation, and religious views. Uses perspectives from diverse academic disciplines and considers education as extending beyond school settings. Offered: W. Gourd (5) I&S, DIV

B EDUC 250 Topics in Education and Popular Culture Examines education in relation to specific elements of popular culture in order to deepen understanding of the connections and tensions within society. Explores how popular culture is used to enhance the education experience. Topics include popular forms of art, media, literature, or theatre. Offered: ASp. Au (3/5, max. 10) VLPA

B EDUC 255 Critical Diversity Studies Introduces theories, concepts, research, and polices that provide a foundation for exploring connections between diversity and equity and for recognizing ways in which these connections are relevant to individuals, institutions, and the world. Offered: jointly with BIS 255; Sp. J. MURR (5) I&S, DIV

B EDUC 300 Research and Educational Knowledge Develops critical literacy of educational research. Explores issues of subjectivity and objectivity, political implications of research, standpoint of researcher, participatory action research, bringing self into study of education, and limits and benefits of qualitative and quantitative forms of inquiry in educational research. Offered: W. (5)

B EDUC 315 History of Education in the United States A historical survey of education. Emphasis on relationship between idea and practice. Topics include education and colonialism, formation of state school systems, progressive education, policy and practice, equal access and opportunity, education and social structure, and standards and reform. Offered: Sp. (5) I&S

B EDUC 328 Diversity, Leadership, and Engagement Explores theories and practices of diversity, leadership, and engagement. Provides opportunity for leadership development and academic reflection in relation to initiatives in which students work on questions of diversity and campus or community engagement. Recommended: BIS 255/B EDUC 255. Offered: jointly with BIS 328. (1-5, max. 20) DIV

B EDUC 330 Race, Culture, and Identity in the Classroom Examines the ways that various aspects of student identity are entwined with pedagogy and curriculum. Focuses on multicultural education, the politics of language, racism and testing, cultural identity development, and classroom diversity. Prerequisite: either B EDUC 210, B EDUC 220 or B EDUC 230. (5) I&S, DIV

B EDUC 391 Special Topics in Education Explores perspectives on educational policy and practice. Offered: AWSpS. (1-5, max. 10)

B EDUC 392 Independent Study Faculty supervised readings and activities in areas of special interest for individual students. (1-5, max. 10)

B EDUC 401 Study Abroad: Education Combines study at UW Bothell with seminars and field trips organized by the Education faculty or the faculties of host institutions in foreign countries. Topics include education policies, teaching or learning, and cultural perspectives on education. (1-5, max. 15) I&S

B EDUC 402 Human Growth and Learning Focuses on recent research in the area of child and adolescent learning and on the relationship of learning to human growth and development. Credit/no-credit only. (5) I&S

B EDUC 403 Introduction to Special Education Introduces basic knowledge for facilitating the success of all children in general education classrooms, with an emphasis on children who receive special education services. Discusses various disabilities, variations in development, legislation, referral, differentiation, and the general education teachers' role. Not open for credit for students that have taken EDSPE 404 at the Seattle Campus. (2)

B EDUC 405 Context of Learning and Schooling Surveys major themes of historical, legal, philosophical, political, ethical and social contexts of learning and schooling in American society. Integrates several disciplines as the foundation from which to view the instructional process. (3) I&S

B EDUC 406 Introduction to Field Placements Introduction to building learning communities in

classrooms. Involves students in assigned field placements in K-8 schools and in seminars on campus. Credit/no-credit only. (2)

B EDUC 408 Knowing, Teaching, and Assessing in Multicultural Education and Social Studies Provides students with classroom methods, materials, and assessment strategies for teaching social studies in elementary schools. Grounded in democratic beliefs and assumes citizenship participation as an essential part of a free, humane, and civic community. (5) I&S

B EDUC 409 Knowing, Teaching, and Assessing in: Reading, Writing and Communicating The first in a two-course sequence that builds understanding about literacy development and instruction. Focuses on early literacy, writing processes, and children's literature. (3)

B EDUC 410 Knowing, Teaching, and Assessing in Reading, Writing and Communicating The second of two course sequence that builds understandings about literacy development and instruction. Focuses on reading for intermediate readers including comprehension, assessment, and remediation. (4)

B EDUC 413 Knowing, Teaching, and Assessing in The Arts Explores dance, music, visual arts, drama, and literary arts as integral strands of children's learning. Credit/no-credit only. (3)

B EDUC 416 Instructional Design and Assessment Explores the major concepts, theories, and research related to the development of learning opportunities for children that support individual students' development, acquisition of knowledge, and motivation. Focuses on strategies for implementation of instruction in schools. (2)

B EDUC 417 Families, Communities and Schools Examines the fundamental values and assumptions that animate our educational endeavor through families, communities, and schools. Topics include changing demographics, community resources and involvement, and diversity of families. Credit/no-credit only. (2)

B EDUC 418 Knowing, Teaching, and Assessing in Intermediate Level Mathematics Develops understanding of intermediate level mathematics concepts, tools, and strategies for teaching these concepts, and students' mathematical learning. Pre-service teachers explore a variety of activities to facilitate their success as intermediate level mathematics teachers. (4)

B EDUC 419 Knowing, Teaching, and Assessing in Mathematics Introduces the nature of mathematics as an exciting way to interpret the world and as an elegant way to solve problems. Emphasizes using mathematical thinking to discover order and represent patterns rather than memorizing mathematical rules to be followed. (3)

B EDUC 421 Knowing, Teaching, and Assessing in: Earth, Physical, and Life Sciences Introduces the nature of science as subject matter, as a process of inquiry, and as a fascinating way to make sense of the world. Emphasizes the techniques, attitudes, skills, and competencies needed to become a scientifically literate citizen. (4)

B EDUC 423 Knowing, Teaching, Assessing in Health, Fitness and Issues of Abuse Examines health and fitness as it relates to children's development of responsibility health promoting behaviors; how to identify physical, emotional, sexual, and substance abuse; teacher report responsibilities; and methods of teaching about abuse/prevention. Open to Bothell Teacher Certification Program students only. (3)

B EDUC 425 Reflections on Professional Practice Seminar Reflections on field work in educational settings. Credit/no-credit only. (1-5, max. 15)

B EDUC 427 Reflections on Professional Practice Seminar: Becoming a Professional Educator Through readings and reflective writing, students explore teacher as a member of a professional community and as a learner, teacher as agent of social justice, and the personal, social, and professional responsibilities of teaching. Credit/no-credit only. (3)

B EDUC 435 Student Teaching Field experience in K-8 public school classroom part-time or full-time. Supervised placement transitions from observing, assisting, co-teaching, to assuming all facets of the teaching role. Credit/no-credit only. Offered: AW. (2-15, max. 15)

B EDUC 437 Current Issues in Technology Sequenced and concentrated instruction and collaborative work in instructional technology to be integrated with other quarterly course work. Credit/no-credit only. (1-3, max. 9)

B EDUC 441 Second Language Acquisition, Bilingual Education, and the Structure of English Focuses on theories in second language acquisition, bilingual education, and the structure of English. Topics include research, practice, and connections between language, literacy, cultural tradition, identity, and education in preparation for teaching ELL's in general education of classes specifically for ELL's. Offered: AWS. K. GOURD (5) I&S, DIV

B EDUC 442 Curriculum, Instruction, and Assessment in ESOL Introduces curriculum, instruction, and assessment for teaching English for Speakers of Other Languages (ESOL). Required for ESOL Endorsement. Prerequisite: B EDUC 441 (5)

B EDUC 443 Practicum in ESOL Fulfills Washington State ESOL endorsement requirement for structured experience in teaching English to speakers of other languages. Completed with approved mentor teacher in public school setting. Prerequisite: B EDUC 442 Credit/no-credit only. Offered: WSp. K. Gourd (5)

B EDUC 444 Leadership, Advocacy, and Program Assessment in ESOL Explores historical and political contexts of bilingual education in U.S. including legislation, inclusive principles, theory, and research. Focuses on cognitive, academic, social-cultural, and language and educational needs of English Learners through leadership and advocacy. Examines program assessments of services provided to ensure students' needs are met. (5) I&S, DIV

B EDUC 452 Service Learning Practicum in Education To be taken concurrently with any two or three credit UW Bothell Education courses. Requires approximately 40 hours of service learning in a school and/or other appropriate setting approved by the course instructor. Credit/no-credit only. (2, max. 6) I&S

B EDUC 456 Adolescents in School and Society Discusses some of the transformations of consciousness that occur in adolescence and examines how social structures, particularly formal schooling, help shape those transformations. Requires a community-based learning project. Offered: W. (5) I&S

B EDUC 460 Moral Dimensions of Education Explores philosophies of ethics and theories of moral development, focusing on how parents, peers, culture, teachers, and schools influence ethical growth. Examines how schools transmit values, teachers' ethical roles, and moral education content and practices. Incorporates independent learning on topics of interest. Offered: Sp. Joseph (5) I&S

B EDUC 461 Educational Implications of Gender Inequality Examines the historical foundations of gender inequality in education, discuss gender as a factor in access to education, and explores recommended classroom practices designed to reduce gender inequality. (5) DIV

B EDUC 465 Fostering Algebraic Reasoning Focuses on methods of teaching algebra from a developmental perspective, including research-based methods for developing students' algebraic thinking and structure and processes used in algebra. Prerequisite: minimum grade of 2.0 in STMATH 125 or MATH 125. Offered: jointly with STMATH 465. (5) NW, QSR

B EDUC 466 Fostering Geometric Thinking Focuses on methods of teaching geometry from a developmental perspective, including research-based methods for developing students' geometric thinking and structure and processes used in geometry including

proof. Prerequisite: minimum grade of 2.0 in STMATH 125 or Math 125. Offered: jointly with STMATH 466. (5) NW, QSR

B EDUC 467 Fostering Statistical Thinking, Data, and Graphical Analysis Focuses on methods of teaching data and graphical analysis and statistical thinking from a developmental perspective, including how to foster secondary students' statistical thinking, and using technological tools to teach key concepts in secondary mathematics using big data sets, graphical analysis, and dynamic visualization. Prerequisite: minimum grade of 2.0 in STMATH 125 or Math 125. Offered: jointly with STMATH 467. (5) NW, QSR

B EDUC 470 Disability Culture in Schools and Society Examines history, theory, values, and assumptions about disability in the contexts of schools and society. Explores how disability is defined. Focuses on historical and theoretical foundations for defining disability; disability in the context of public schooling; and relationship between disability, social change, and equitable access to opportunity. Offered: W. (5) I&S, DIV

B EDUC 473 History of U.S. Public Schooling Examines the development of educational policy and practice over time. Emphasizes United States schools from 1750 to present. (3)

B EDUC 474 Global Englishes Explores the spread of the English language as a global language and the development of local varieties of English. Examines ways in which people use and appropriate English for their own purposes in various contexts and analyze the diverse beliefs and ideologies that people hold about English. (5) I&S, DIV

B EDUC 475 Global Perspectives on Diversity and Citizenship Education Explores the relationship between diversity and citizenship education in a select group of nation-states. Discusses challenges experienced by citizens in those nation-states as the nations respond to diversity while trying to maintain national cohesion. (3) I&S, DIV

B EDUC 476 New Literacies for Digital Learning Examines "literacy" in a time of global digital communication, collaboration, and creation. Includes both critical and theoretical readings on the rapid shifts in digital culture and hands-on experience with becoming a networked digital learner. Offered: W. (5)

B EDUC 480 Life and Learning in the Middle School Introduces three components of preparation to teach in a middle school: adolescent development, the structure of the middle school, and developmentally appropriate curriculum and instruction (designed specifically for middle schoolers). Recommend for students who are preparing to teach in a middle school or junior high. Offered: Sp. Gourd (3)

B EDUC 482 Assessment in Special and Inclusive Education Introduces assessment for individuals in low incidence, high incidence, and early childhood special education programs. Focuses on principals, administration, and interpretation of legally mandated and high quality formal and informal assessments. Includes practice of scoring, interpreting computer scoring, interpretation, and writing summary reports. Prerequisite: B EDUC 403 (5) DIV

B EDUC 491 Special Topics in Education Offered: AWSpS. (1-5, max. 15)

B EDUC 493 Environmental Education Analyze various environmental programs and prepare an individualized project. Learn to apply ecological concepts in the classroom and learn how to teach about various environmental education programs. (3) NW

B EDUC 501 Inquiry in Education Introduces tools for looking closely at classrooms and professional practice. Explores a professional question through gathering information, collegial discussion with their peers, and readings that offer multiple perspectives. Offered: A. (3/5)

B EDUC 502 Teachers' Self-Understanding Uses readings and writing autobiography and examining key concepts in multicultural education as a basis for

creating the reflective space necessary for teachers to better understand how personal elements of their lives, formed historically and culturally, influence their teaching and relationships with students. Offered: W. (3/5)

B EDUC 503 History and Politics of Teaching Explores historical, political, and social issues that affect classrooms and schools, as well as the nature of historical and political analysis. (3)

B EDUC 504 Theories of Organizational Change and School Reform Explores theories of organizational change and school reform. Practical strategies on how to be comfortable with and facilitate change in educational situations. Offered: Sp. (3/5)

B EDUC 507 Reviewing the Literature Explores how to locate, analyze, and synthesize professional literature on a topic and how to assemble the resources necessary to write a review of that literature. Supports critical literature review application of knowledge product for program completion dossier. (3)

B EDUC 508 Early Literacy Development and Instruction Builds an understanding of how young children (ages 4-8) develop literate behaviors, and how teachers can support this development. Explores emergent literacy behaviors, oral language development, building a literate identity, phonemic awareness, decoding, reading comprehension, spelling, and writing. (3)

B EDUC 510 Literacy Instruction for Diverse Learners Helps teachers meet the educational and linguistic needs of students with diverse needs or limited English language skills. Emphasizes instructional strategies consistent with a variety of approaches to curriculum adaptation and second-language learning. Examines strategies for classroom adaptation. Place, Smith (5)

B EDUC 511 Reading Practicum: Responsive Small Group Instruction Examines theory, research, and practice in relation to elements of responsive reading instruction including assessment, word identification, fluency, comprehension, vocabulary, and ownership. Applies learning to practice through small group reading instruction for elementary-grade children at local, school-based summer reading program. Offered: S. (5)

B EDUC 512 Theoretical Foundations for Multicultural Classrooms (3)

B EDUC 515 Perspectives on Curriculum Integration Explores various means of developing integrative curriculum. Develops familiarity with existing methods of integrating curriculum and, by expanding the understanding of integration, to develop new methods. Studies approaches to integration within a single subject and between subjects will be developed into useable plans. Offered: S. Eisele (3)

B EDUC 516 Teaching Diverse Students (3)

B EDUC 517 Working with Struggling Readers Grades 3-8 Develops the strategies and understandings necessary for effective assessment and instruction of struggling readers in grades 3-8. Focuses on classroom-based assessments and their benefits for informing individual or whole class reading instruction. (3)

B EDUC 518 Observing and Describing Children and Their Work Focuses on observation and description of children and their work. Learn skills of observation as well as a process of systematic collaborative inquiry that validates teachers' knowledge of their students while also generating new knowledge. Study the work of teacher researchers who base their work on thoughtful observations of children. (3)

B EDUC 519 Classroom Discourse Examines how classroom talk creates and conveys multiple and complex notions of self, roles, status, learning, and subject matter. Addresses what discourse is present in classrooms and how can it be best used to facilitate teaching and learning. (3)

B EDUC 520 Current Issues: Multicultural Education Offered: S. (3-5, max. 10)

B EDUC 521 Using Multicultural Literature in the Classroom The dimensions of multicultural education serve as a framework for educators to review and compile bibliographies of books and compile bibliographies of books that can be used with students in the classroom. Discusses books for children and adults. Discussion and reflection on concepts such as essentialism and representation. Selection and evaluation of books to infuse multicultural content into the curriculum. Banks (3)

B EDUC 522 Education and the American Dream Considers tensions inherent in the deep American belief that individuals can reach unlimited potential through success in school. Looks at ways in which the American educational system has been created within American beliefs in equal opportunity based on merit, yet remains an institution that sorts individuals for very unequal futures. Offered: A. Galen (3)

B EDUC 523 Improving Human Relations in Schools Addresses issues related to teaching in a pluralistic society. Explores the historical foundations of intergroup education, theories supporting the human relations approach and teaching strategies, materials, and assessment that can be used to improve human relations. (3)

B EDUC 525 Evaluating Curricula, Programs, and Institutions Examines the extent to which curricula, programs, and institutions effectively meet objectives. Examines terminology, models, standards, and practices in program evaluation from a perspective useful to practicing teachers and other professionals. Discusses political realities, social demands for accountability, and ethical considerations in program evaluation. (3)

B EDUC 527 Educational Theorists and Reformers Provides an in-depth study of the work of prominent educators whose contributions have significantly impacted understandings of the nature of learning, teaching, and schooling. (3, max. 6)

B EDUC 530 Current Issues: Integrated Curriculum (3-5, max. 10)

B EDUC 531 Current Issues in Teaching Examines current issues confront classroom teachers: new assessment methods, classroom management, collaborative learning, Washington State Essential Academic Learning Requirements, national standards in mathematics and science. (1-6, max. 25)

B EDUC 532 Discourse in the Mathematics and Science Classroom Examines essential questions regarding classroom discourse and how it relates to teaching practice and student learning in K-12 mathematics and science classrooms. Questions include: what is classroom discourse; how does it relate to learning math and science; what issues can be investigated through the study of discourse in math and science classrooms. Offered: A. Hintz (3)

B EDUC 533 Computers in the Classroom: Issues and Uses Examines the dynamics of instruction and interaction in classrooms while preparing students for worlds that do not yet exist. Essential questions include issues of equity, disengagement, and the quality of learning and knowing in a diverse and complex society. Uses current technology to enhance computer skills, create and evaluate quality learning experiences, and explore issues of equal access for all. (3)

B EDUC 534 Current Issues in Literacy Research Explores current research examining issues of literacy development and instruction. Considers research design, data analysis, study findings, and classroom implications from a critical practitioner-oriented perspective. Smith (3)

B EDUC 535 Writing Across the Curriculum Explores instructional strategies designed to guide students in acquiring and developing writing skills across the curriculum. Emphasizes preparing materials to use in single subject-area teaching as well as developing as a writer to effectively model and scaffold writing instruction. (3)

B EDUC 536 Teacher Leadership: Renewing, Revitalizing, Reframing Develops and promotes in teachers the knowledge, skills and "conditions of the heart" necessary to be a teacher leader. Based on the premise that teachers need to be active participants in the formation of a future that positively impacts the lives of students and professional community of schools. (3)

B EDUC 537 Assessment Analyzes the development, use, and interpretation of classroom-based assessments, including student self-assessment. Explores concepts of validity, reliability, and appropriate use in relationship to both classroom-based and commercial assessments. Critiques use of assessment in relation to goals of equity, educational quality, and accountability. (3)

B EDUC 538 Adolescent Literacy Examines current issues, research, and innovations in adolescent literacy research and practice. Considers the issues of motivation, comprehension, vocabulary, and multiple literacies including technology and home-school connections. Examines articles by research and teacher leaders in the field. (3)

B EDUC 539 Literacy Coaching Examines research and practice focused on literacy coaching in terms of mentoring, peer collaboration, and teacher leadership development. Emphasizes literacy content and pedagogical content knowledge, theories of teacher change, and models of effective professional development. (3)

B EDUC 540 Principles of Inclusion: Students and Families Focuses on issues, principles, practices, and legal responsibilities to student identified for special education and English language learners. Specific attention is given to culturally-and developmentally-aware policies and practices inclusive of students and their families. Offered: Sp. Gourd, Naranjo (5)

B EDUC 541 Second Language Acquisition, Bilingual Education, and the Structure of English Focuses on theories in second language acquisition, bilingual education, and the structure of English. Topics include research, practice, and connections between language, literacy, cultural traditions, identity, and education in preparation for teaching ELLs in general education of classes specifically for ELLs. Offered: W. Gourd, Naranjo (5)

B EDUC 542 Curriculum, Instruction, and Assessment in English for Speakers of Other Languages Participants develop curriculum, instruction, and assessment for speakers of other languages learning in English at any level. Emphasizes support of language and content development in general education classrooms. Required course in ELL endorsement program. Prerequisite: B EDUC 541. Offered: A. K. GOURD (5)

B EDUC 543 Practicum for Teaching English Speakers of Other Languages Site-based experience teaching students acquiring English. Includes coaching by certified ELL teacher. Focuses on practice of curriculum, instruction, assessment, and advocating in support of students acquiring English. Prerequisite: B EDUC 542 Credit/no-credit only. Offered: WSp. (5)

B EDUC 544 Leadership, Advocacy, and Program Assessment in ESOL Explores historical and political contexts of bilingual education in U.S. including legislation, inclusive principles, theory, and research. Focuses on addressing cognitive academic, social-cultural, and language needs of ESOLs. Examines language assessment tools, tests, ad other factors for determining placement in language-support programs. Offered: Sp. (5)

B EDUC 547 Transformative Curriculum Leadership Explores strategies and efforts for individual capacity and collaborative problem solving for leadership in schools and communities to bring about progressive curriculum transformation. Investigates forms of transformative curriculum for equity, social justice, multiculturalism, peace, and ecojustice. (5)

B EDUC 552 Curriculum, Instruction, and Assessment in Middle and Secondary Science I Participants develops curriculum, instruction, and assessment based on theories of teaching and learning in science

and inclusive of all students. Attention given to content-based use of technology, working across disciplines, teaching ELL's, students with special needs, and co-teaching models. Includes direct work with adolescents. Prerequisite: B EDUC 556; B EDUC 557. Offered: Sp. (5)

B EDUC 553 Curriculum, Instruction, and Assessment in Secondary English, Social Studies, and History Participants develops curriculum, instruction, and assessment based on theories of teaching and learning in science and inclusive of all students. Attention given to content-based use of technology, working across disciplines, teaching ELL's, students with special needs, and co-teaching models. Includes direct work with adolescents. Gourd (5)

B EDUC 554 Curriculum, Instruction, and Assessment in Middle Grades and Secondary Science Learn to teach science in a way that makes the content both rigorous and accessible. Develop an understanding of how the world of the student and the worlds of science intersect. Participate in best practices of science teaching and reflect on these practices. Offered: A. (5)

B EDUC 555 Building Partnerships: Home, School, and Community Examines the forms of collaboration, contention, and controversy in the relationship between schools, the families of students, and local communities from historical, sociological, and political perspectives. (5)

B EDUC 556 Adolescent Development Provides an in-depth examination of specific theories, concepts, and methods related to adolescence. Explores a wide range of topics including: cognitive development, moral development, identity formation, gender role, social relationships, and the effects of culture and schooling on adolescent development. Includes a community-based learning component. Offered: W. (5)

B EDUC 557 Curriculum Studies Introduces the field of curriculum studies including curriculum theory and interdisciplinary study of the educational experience. Explores dominant ideas and alternative practices. Focuses on how curriculum and schools are manifestations of culture and how historical and contemporary premises about curriculum influence the culture of classrooms and schools. Offered: A. P. JOSEPH (5)

B EDUC 558 Curriculum, Instruction, and Assessment in Secondary Social Studies and History Explores standards and critical areas of social studies and history. Discusses how to design learning objectives, plan for instruction, use resources, evaluate student learning, and teach social studies and history as integrated and interdisciplinary subjects. Offered: A. (5)

B EDUC 559 Curriculum, Instruction, and Assessment in Secondary and Middle Level Mathematics I Participants develops curriculum, instruction, and assessment based on theories of teaching and learning in science and inclusive of all students. Attention given to content-based use of technology, working across disciplines, teaching ELL's, students with special needs, and co-teaching models. Includes direct work with adolescents. Prerequisite: B EDUC 556; B EDUC 557. Offered: Sp. (5)

B EDUC 560 Curriculum, Instruction, and Assessment in Secondary Science and Mathematics II Emphasizes the complexity of teaching and learning science and mathematics. Works closely with expert teachers to develop and teach a unit of instruction. Gains practice in designing, conducting, and reflecting on formative and summative assessments in the school setting. Offered: A. (5)

B EDUC 561 Education and Gender (3)

B EDUC 562 Multicultural Education: Race, Class, and Gender (3)

B EDUC 563 Curriculum, Instruction, and Assessment in Secondary English Methods I and II Helps prospective teachers of English become more thoughtful about the aims, theories, and research methods for teaching English in secondary schools. Encourages reflective thought in the development of

materials and plans for implementing secondary English lessons and units that can facilitate student learning. Offered: A. (5-, max. 10)

B EDUC 564 Field Experience in Secondary Schools Provides field experiences to reflect on teaching and learning in the secondary schools. Overlap with discipline specific methods course. Offered: A. (3-6, max. 6)

B EDUC 565 Student Teaching Students assume all facets of the teaching role in a full-time placement. Prerequisite: satisfactory completion of required secondary endorsement course work. Offered: W. (10)

B EDUC 566 Education and Technology Examines issues related to the uses of technology in the classroom. Introduces advances in educational technology and critiques of the pedagogical and epistemological implications of increased reliance upon information technologies in the classroom and the broader society. (3)

B EDUC 567 Telling Our Stories As Teachers: Digital Storytelling as Reflective Practice Uses multi-media tools to weave the complex voices, images, and energy of classrooms to create digital stories as teachers. Through, software tutorials, work-shopping of writing, peer review of emerging projects, and production time, students learn more about themselves as teachers while also learning about technologies that can be used in classrooms. Offered: S. Galen, Van (5)

B EDUC 568 Critical Digital and Media Literacy for Children and Youth This course will deepen critical media and digital literacies while supporting work with children and youth in a highly mediated culture. Offered: Sp. J. Van Galen (3)

B EDUC 569 Educational Policy, School Politics and Teacher Power Teachers work in a complex web of political relationships, contested values, and competing ideas in schools. Exercises help participants understand teachers' (K-12) and policymakers' roles in school politics and develop frameworks from which to base the responsible exercise of autonomy in schools. (3)

B EDUC 570 Problems in Qualitative Research Methodology Examines a specific qualitative research methodology on a rotating basis. Examples of different methodologies may include action research, archival studies, biography, case study, classroom observation, ethnography, feminist studies, grounded theory, histography, narrative studies, phenomenological studies, policy research, and sociolinguistics. (3-5)

B EDUC 573 Fostering Early Numeracy Focuses on K-3 students' mathematical thinking, emphasizing number and operations in base ten. Draws on most current frameworks and documents to address content and pedagogy that support students' conceptual understanding of, and fluency with, number. Incorporates study of classroom routines and formats that support early numeracy. A. HINTZ (3)

B EDUC 576 New Literacies for Digital Learning Examines "literacy" in a time of global digital communication, collaboration, and creation. Includes both critical and theoretical readings on the rapid shifts in digital culture and hands-on experience with becoming a networked digital learner. Readings contextualize equity in digital learning in civic life, youth culture and commercial endeavors. Offered: A. J. Van Galen (5)

B EDUC 577 Curriculum Development Explores various models of curriculum development including established practices and alternative paradigms. Provides opportunities to analyze and critique current and historical models of curriculum planning and to examine the pedagogical, social, and political influences upon curriculum development. Offered: W. (5)

B EDUC 579 The Power and Beauty of Mathematics Examines how mathematics helps us discover the rules and structures that underlie patterns and regularities in our world. Illustrates how an

integrated curriculum combined with inquiry-based methodology can be used to explore some of the mathematical foundations on which the world rests. (3)

B EDUC 587 Science, School Knowledge, and Contemporary Social Issues Explores the impact of science on society as well as the vision for the teaching of science currently being advocated by those involved with science education reform. Discusses contemporary social issues, such as the ethical dilemmas presented by scientific advancements and science education reform issues. (3)

B EDUC 591 Special Topics in Education (1-5, max. 10)

B EDUC 592 Independent Study Faculty-supervised readings and research in areas of special interest for individual students. (1-6, max. 12)

B EDUC 594 Completion Dossier Supports development of culminating portfolio demonstrating accomplishment of program goals for academic learning and improvement of professional practice. Credit/no-credit only. Offered: AWSpS. (1)

B EDUC 595 Professional Portfolio Provides an opportunity for students to reflect on learning and professional growth through the construction of a culminating portfolio. Serves to document and deepen understanding of the competencies gained as a result of participation in the program. Credit/no-credit only. (3-5, max. 10)

B EDUC 596 Professional Paper Complete a professional paper under the advisement of a faculty member in the program following submission and approval of a description of the proposed paper. Extends over two quarters and includes a public presentation of the completed work. Credit/no-credit only. (2-5, max. 10)

B EDUC 597 Practitioner Focused Research Examines how change in classrooms can be fostered by practitioner research projects. Provides an opportunity to carry out the steps of a site-based research project: examine literature; develop research questions or testable hypothesis; and generate methodology for carrying out investigation as a practitioner. Prerequisite: B EDUC 501. Credit/no-credit only. (3)

B EDUC 598 Project Implementation Second course in a three-course sequence of a culminating project focused on the implementation of a project designed to create change in an educational setting. Credit/no-credit only. ([2-5]-, max. 15)

B EDUC 599 Culminating Project Third course in a three-course sequence of a culminating project focused on an analysis, synthesis, and final write-u of a project implementation experience. Credit/no-credit only. (2-5, max. 15)

Leadership Development for Educators

LEDE 510 Personal Leadership for Schools Helps principal candidate develop the personal qualities and commitments associated with successful school leadership. Focuses on leadership theories, professional knowledge and ethics, and strategies for continued learning in professional practice. (2-6, max. 8)

LEDE 520 Leadership for Curriculum and Teaching Helps principal preparation candidates expand knowledge for assisting other teachers with curriculum, instruction, and student engagement with learning. Focuses on knowledge of exemplary practice and documentation of impact of teaching and learning in schools. (2-6, max. 8)

LEDE 530 Leading Schools as Responsive Public Institutions Helps principal candidates build knowledge for developing and stewarding a schools' vision and goals so that they are just, sustainable, and responsive to legal, political, professional, and local interests. Focuses on legal, political, and professional contexts of school leadership and builds skills for communication about school goals and needs. ([2-6], max. 8)

LEDE 540 Leading Schools as Continuously Renewing Organizations Helps principal candidates lead an effective and continually improving organization. Builds understanding of school managerial responsibilities as well as more complex tasks of assessing school needs and developing theories of action that focus daily work on desired school outcomes. ([2-6]-, max. 8)

LEDE 550 Leading Inclusive School Communities Helps principal candidates strengthen relationships, steward norms, establish programs, and lead conservations that foster collaborative decisions and collective action among the school's many constituencies. Builds understanding of the ways that social capital, student and family diversity, and family involvement influence student learning and can be influenced by principle leadership. ([2-6]-, max. 8)

LEDE 560 Leadership for Student Services Helps principal candidates develop knowledge and skills for school-level delivery of supports for students with exceptionalities, including creating a conducive climate for learning, identifying exceptional learning needs, and providing services needed to supplement instruction. ([2-6]-, max. 8)

LEDE 591 Topics in Educational Leadership Examines topics in educational leadership with particular attention to evolving leadership demands associated with advanced in law, public policy, educational research, and administrative practice. (1-5, max. 15)

School of Interdisciplinary Arts and Sciences

Creative Writing and Poetics - Bothell

BCWRIT 500 Writing Workshop: Between Prose and Poetry Focuses on the cross over between prose and poetry in multiple genres. Considers the prevalence of narrative and alternatives to narrative. Offered: AWSp. Brown, Heuving, Hiebert, Milutis (5)

BCWRIT 501 Writing Workshop: Between Fact and Imagination Examines the relationships between fact and imagination in fiction, non-fiction, and poetry writing. Offered: AWSp. Brown, Heuving, Hiebert, Milutis (5)

BCWRIT 502 Writing Workshop: Processes of Thinking and Memory Engages the primary processes of thinking and memory as they are affected by divers writing practices and media applications. Offered: AWSp. Brown, Heuving, Hiebert, Milutis (5)

BCWRIT 510 Poetics Seminar: Cultural Change and Writing Engages the subject of poetics as writing theory and practice. Focuses on cultural, social, and technological change as these create new challenges and possibilities for creative writing. Offered: AWSp. Brown, Heuving, Hiebert, Milutis (5)

BCWRIT 511 Poetics Seminar: Writers' Research Addresses how writers utilize research in their writing and inquires into different kind of research that can be pursued: textual, ethnographic, and performance-based. Offered: AWSpS. Brown, Heuving, Hiebert, Milutis (5)

BCWRIT 512 Poetics Seminar: Art, Technology, and Practice Explores relationships among art, technology, and creative practice. Examines connections among diverse art forms, inquiring into their social, philosophical, and aesthetic dimensions. Offered: AWSpS. Brown, Heuving, Hiebert, Milutis (5)

BCWRIT 517 Teaching Practicum Practicum in which students gain theoretical and practical experience in teaching within community groups and organizations, in elementary and secondary schools, or in community colleges and universities. (3-5)

BCWRIT 520 Creative Writing and Poetics Internship Students conduct an internship within an organization in order to develop and extend their writing expertise. Topics and sites vary with student interest. (2-5, max. 5)

BCWRIT 530 Community-Based Practicum Students initiate, plan, carry through, and evaluate a literary or arts event or series of events for a specific community or arts venue. Topics and sites vary with student interest. (2-5)

BCWRIT 587 Topics in Creative Practice Focuses on one or more art of disciplinary practices and their applications for creative writing. (5)

BCWRIT 597 Directed Readings Intensive reading in literature, literary and art criticism, critical theory, or poetics. (2-10, max. 10)

BCWRIT 598 Directed Research Focused inquiry into specific research ideas, issues, or topics and elected analytical and creative methods for pursuing these. (2-10, max. 10)

BCWRIT 700 Master's Thesis Includes completion of a creative thesis in one of the following areas: poetry, fiction, non-fiction, or cross genre as well as a poetics essay or artist's statement. Students may elective to engage multiple media or performance venues in partial completion of their thesis. Offered: AWSpS. Brown, Hiebert, Heuving, Milutis ([1-5]-, max. 20)

Cultural Studies - Bothell

BCULST 500 Formations of Cultural Studies Focuses on historical and contemporary forms of cultural studies inquiry, with an emphasis on the local and global questions and problems that shape that inquiry. Offered: A. Burgett, Krabill (10)

BCULST 501 Cultural Studies as Collaboration Focuses on interactions of ethnographic, textual, and performance-based research methods, with special emphasis on participatory action research strategies. Combines theoretical considerations and experimental learning. Prerequisite: BCLST 500. Offered: Sp. R. KRABILL (5)

BCULST 502 Cultural Studies Research Practices Focuses on interactions of ethnographic, textual, and performance-based research methods, with special emphasis on participatory action research strategies. Offered: W. (5)

BCULST 510 Engaging Cultural Studies Focuses on the design, development, and piloting of students' individual or collaborative capstone projects and the development of their program portfolio. Initiates the first phase of the capstone project. Prerequisite: BCULST 502. Offered: AWSp. (5)

BCULST 511 Portfolio and Professional Development Focuses on the development of individual or collaborative capstone projects, with faculty-facilitated workshops and students' own independent writing and research. Prerequisite: BCULST 510. Offered: AWSp. (1)

BCULST 512 Cultural Studies and its Publics Focuses on the completion and public presentation of the students' individual or collaborative capstone projects, including the annual MA symposium and the completion of the individual student's program portfolio. Prerequisite: BCULST 511. Offered: AWSp. (10)

BCULST 520 Internship Internship with a local organization, agency, or arts company that incorporates a "'field-based"' component into learning. Includes a cultural studies project that benefits the organization and has academic merit. Prerequisite: BCULST 500. Offered: AWSpS. (2-5, max. 10)

BCULST 570 Prisons, Politics, and Activism Focuses on prisons as a site through which to explore critically the intersections of punishment, policies, institutions, identities, and social movements. Berger (5)

BCULST 580 Approaches to Ethnographic Research Investigates and evaluates the theoretical and methodological foundations on ethnography. Provides hands-on experiences in ethnographic methods, and development and assessment of ethnographic research proposals. Offered: AWSp. Lerum, Stewart (5)

BCULST 581 Approaches to Textural Research Advanced investigation of the theory and practice of textual research methods. Identifies the different components of textual research and explores their interrelation. Prerequisite: BCULST 500 or permission of instructor. Offered: AWSp. (5)

BCULST 582 Approaches to Performance-Based Research Methods Focuses on how a specific performance approach, such as dance, movement, theatre, storytelling, mixed media, or performing ethnography, acts as a site of research in relation to a particular topic. Examines how to implement performance-based approached and assess their significance. Prerequisite: BCULST 500 or permission of instructor. Offered: AWSp. (5)

BCULST 583 Topics in Public History and Culture Explores theories and practices of public history and culture. Offered: AWSpS. Watts (5)

BCULST 584 Topics in Media Culture Explores issues in media culture, such as the connections between media and social movements, from cultural studies perspectives. Offered: AWSpS. (5, max. 15)

BCULST 585 Topics in Cultural Activism and Advocacy Explores theory, practice, and dilemmas relating to cultural advocacy, understood as object, site, instrument, or basis of social action. Offered: AWSpS. Burgett, Stewart (5)

BCULST 586 Topics in Arts and Cultural Policy Explores historical and contemporary issues in arts and policy. Includes examination of the roles played by governmental, for-profit, and not-for-profit organizations in shaping artistic and cultural practices and arenas. Topics and approaches vary with instructor. (5, max. 10)

BCULST 587 Topics in Cultural and Arts Practice Investigates issues in cultural and arts practice in diverse settings. Offered: AWSpS. (5)

BCULST 588 Topics in Culture and Diversity Investigates the intersections between culture and diversity and focuses on the encoding and transmission of knowledge through a variety of cultural practices. Uses ethnographic, historiographical, textual, and performance based methods to move from the forms themselves to community sites of memory and identity. Offered: AWSpS. (5, max. 15)

BCULST 589 Topics in Global Cultural Studies Links a specific area of study, such as hip hop. YouTube, or garbage, to global cultural studies and the methodologies of visual, material, textual, or arts-based research. Offered: AWSpS. (5, max. 15)

BCULST 591 Research Colloquium Provides an opportunity for graduate students and faculty members to exchange research ideas, present findings, discuss analytical methods and tools, and evaluate the implications of the presented research. Credit/no-credit only. Offered: jointly with BPOLST 591; AWSp. (1-2, max. 6)

BCULST 592 Topics in Cultural Studies Research Allows for the investigation of special topics in cultural studies research. Offered: AWSpS. (2-5, max. 10)

BCULST 593 Topics in Cultural Studies Explores in depth specific historical, political, or social aspects of cultural practice, such as digital humanities, the culture and the environment, or arts as cultural studies, and links this analysis to the varied processes of producing these types of cultural work. Offered: AWSpS. (3-5, max. 15)

BCULST 594 Research Design Extends an understanding of research design principles, developing further capacities in research design, especially in relation to sites that necessitate sensitivity to emergent cultural practices and the evolving nature of partnerships. Provides opportunities for research design in response to requests from the community. Offered: AWSpS. (5)

BCULST 595 Cultural Studies Skills Workship Provides the opportunity to develop applied skills in an area relevant to professional careers in social, cultural, and arts fields. Workshops emphasize hands-on

problem solving, case studies, and actual practice. (1-3, max. 9)

BCULST 596 Study Abroad Study abroad opportunity that incorporates a global learning component into cultural studies. Offered: AWSpS. (5-15, max. 15)

BCULST 598 Directed Research Develops research ideas, analytical methods and tools, or the cultural studies implications of research in specific directions that are not covered in the standard MACS offerings. Prepares for a cultural studies/community project. Offered: AWSpS. (1-5, max. 15)

BCULST 599 Capstone Research Provides intensive one-on-one research support for the capstone project. Students and their capstone advisors establish customized meeting/collaboration scheduled according to individual needs. Prerequisite: BCULST 502. Offered: AWSpS. (1-5, max. 10)

Interdisciplinary Arts and Sciences - Bothell

BIS 111 Digital Thinking Introduces the fundamental concepts behind computing and computational thinking including logical reasoning; problem solving, data representation; abstraction; complexity management; computers and network operations; effective web searches; ethics; and legal and social aspects of information technology through the creation of popular digital artifacts such as web pages, animations, and video games. Offered: jointly with CSS 101; AWSp. (5) QSR

BIS 115 Digital Cultures Examines the politics of diversity, equity and the difference in the digital age. Explores technology as a lived experience and discusses how digital media has transformed social relations, the economy and the politics of scale. S. Cram (5) I&S

BIS 121 Introduction to Drawing Builds basic drawing skills, develops understanding of primary concepts which relate to drawing and develops an understanding of the grammar or syntax of two-dimensional language. Students move beyond their current knowledge and abilities and link new skills, concepts, and understandings to creative expressing. Offered: AWSp. (5) VLPA

BIS 130 What Is Art Asks and answers the question "What is art?" by exploring the purpose and intent of diverse art practices and projects. Students will engage in art-making that leads them to engage this basic question. (5) VLPA

BIS 131 Introduction to Arts Practice Includes active exploration of processes through which artists discover and translate ideas, feelings, and concerns into various forms of objects. Uses a wide variety of methods and approaches, from traditional to technological, to promote artistic expression. Promotes discussions and critiques to lead to a better understanding of the creative process. Offered: AWSp. (5) VLPA

BIS 132 Introduction to Photography An introduction to photography as an art form. Focuses on camera operation and capturing images with full creative control. Encourages students to explore the visual language of photography; learn about contemporary and past photographers; communicate in the visual medium; and look at photographic works with a critical eye. Offered: AWSp. (2-5, max. 7) VLPA

BIS 133 Introduction to Acting An interactive approach towards the investigation and development of basic acting skills through improvisation, monologues, scene-work, movement exercises, in-class writing exercises, and experimental ensemble projects. Offered: AWSp. (2, max. 6) VLPA

BIS 134 Introduction to Dance Provides the opportunity for students to understand dance as a physical practice, creative art, and academic discipline as well as learn about the structural elements of dance, choreographic tools, and the art form's history. Offered: AWSp. (2, max. 6) VLPA

BIS 135 Introduction to Painting An exploration of visual skills, materials, and conceptual possibilities for water-based painting, including its purposes and

potential for image, concept, and communication. Students incorporate interdisciplinary, personal, and cultural interests into their images and develop their skills through work, peer reviews, and written artist statements. (5) VLPA

BIS 136 Art and Public Spaces Examines works from across the arts: painting, writing, film, architecture, theater, new media. Explores their relationship to public spaces such as museums, site-specific structures, galleries, and exhibitions, as well as the history of their public reception. Includes site visits. Offered: AWSp. (5) VLPA

BIS 141 Natural History and Environmental Science Introduces the study of the natural world through the approaches and tools of both traditional natural historians and modern scientific inquiry. Emphasizes the application of these approaches to studying nearby natural areas and using education principles to communication and interpret nature. W. GOLD, M. GROOM, A. LAMBERT, D. STOKES (5) NW

BIS 153 Introduction to Geology Survey of the physical systems that give the earth its form. Emphasizes the dynamic nature of interior and surface processes on the earth and stressing the value of geological forms in understanding of the past and predicting future events. Offered: jointly with BST 153; WSp. (5) NW

BIS 154 Introduction to Oceanography Case studies of research on the oceans, deep-sea exploration, climate change, and human impacts on marine life. Considers societal factors affecting progress in marine science, changing popular attitudes toward the oceans, and key current policy implications of marine science. Offered: jointly with BST 154; AWSp. (5) NW

BIS 161 Introduction to Film Narrative Surveys the historical, biological, and cultural basis for film narrative and provides students with a critical understanding of its components and variations to enable them to create an original film treatment. Combines readings and critical viewings of films. Offered: AW. (5) VLPA

BIS 170 Introduction to Psychology Surveys major areas of psychological science. Core topics include human social behavior, personality, psychological disorders and treatment, learning, memory, human development, biological influences, and research methods. Related topics may include sensation, perception, states of consciousness, thinking, intelligence, language, motivation, emotion, stress and health, cross-cultural psychology, and applied psychology. Offered: AWSpS. (5) I&S

BIS 174 American Lives Studies the biographies of Americans who made significant contributions during a particular era in American history. These biographies provide a platform for examining social, political and economic developments, as well as how those developments shaped American attitudes, identities, and institutions. Offered: W. (5) VLPA/I&S

BIS 175 Introduction to American Government Examines the major institutions and processes of American government, including civil liberties and rights, federalism, Congress, the presidency, the judiciary, executive branch, political parties and elections, interest groups, and civic engagement. Offered: AWSp. (5) I&S

BIS 178 Introduction to Communication Introduces topics in the study of human communication. Focuses on key goals such as identities, relationships, and communities; modes of interaction such as linguistic, kinesthetic, visual, and mediated; and settings such as one-to-one, small group, organizations, virtual, and mass media. Offered: ASp. (5) I&S

BIS 181 Introduction to Sociology Explores the fundamental sociological principles and seeks to describe individuals in both groups and societal contexts. Familiarizes students with sociological theory and research methods and applies these to the historical and contemporary inequities associated with social structure, class, race, ethnicity,

class, gender, sexual orientation, ability, religion, and age. Offered: AW. (5) I&S, DIV

BIS 193 Introduction to Philosophy Major philosophical questions relating to such matters as the existence of God, the foundations of knowledge, the nature of reality, and the nature of morality. Approach may be either historical or topical. Offered: Sp. (5) I&S

BIS 200 Introduction to Microeconomics Analysis of markets: consumer demand, production, exchange, the price system, resource allocation, government intervention. Offered: jointly with B BUS 220; AWSpS. (5) I&S, QSR

BIS 201 Introduction to Macroeconomics Analysis of the aggregate economy: national income, inflation, business fluctuations, unemployment, monetary system, federal budget, international trade and finance. Prerequisite: BIS 200, B BUS 220 or B CUSP 200. Offered: jointly with B BUS 221; AWSp. (5) I&S, QSR

BIS 202 Critical Reasoning Engages students as active thinkers in their reading, analysis of writing and media, and writing. Emphasis is placed upon formulating, and critically evaluating arguments in examples and essays typical of both academic inquiry and active citizen engagement in everyday life. (5) I&S, QSR

BIS 203 History of Inter-Arts Considers InterArt forms as a method for creating new arts practices and cultural insight. The range of intersections may include, arts and sciences, literature and performance, film and dance, and painting and poetry. (5) VLPA

BIS 204 Introduction to Journalism Covers the basic elements of reporting and writing for print media, as well as meta-issues of ethics, the First Amendment, and a brief history of American journalism. Teaches reporting skills and the cultural context for the practice of those skills. (5) VLPA/I&S

BIS 205 Technologies of Expression Explores fundamental technologies of expression such as the book, film, and the computer and their implications for social and individual identity-formation, cultural critique, and art-making. Examines how media functions to shape human identity. (5) VLPA/I&S

BIS 206 Engaging Literary Arts Foregrounds questions about literary arts: What are the purposes of literary arts? What approaches might we use to understand them? How to they relate to the societies and cultures in which they are located? May focus on individual writers, movements, historical periods, genres, or topics. (5, max. 15) VLPA

BIS 207 Shakespeare & Film Provides tools to understand and analyze Shakespeare's written plays and their film adaptations. (5) VLPA

BIS 208 Experimenting Through the Arts Explores the relationship between creative arts and research. May focus on performance, visual, or literary arts as well as diverse media. Research may include study of artistic forms as well as specific topics. Heuving (5, max. 15) VLPA

BIS 209 Engaging Visual and Media Arts Foregrounds questions about visual arts: What are the purposes of the visual arts? What approaches might we use to understand them? How do they relate to the societies and cultures in which they are located? May focus on individual writers, movements, historical periods, genres or topics. (5, max. 15) VLPA

BIS 212 Engaging Performing Arts Foregrounds questions about performing arts: What are the purposes of the performing arts? What approaches might we use to understand them? How do they relate to the societies and cultures in which they are located? May focus on individual performers, movements, historical periods, genres, or topics. (5, max. 15) VLPA

BIS 216 Introduction to Cultural Studies Introduces cultural studies as an interdisciplinary field and practice. Explores multiple histories of the field with an emphasis on current issues and developments.

Focuses on culture as a site of political and social debate and struggle. Equivalent to ENGL 207. Burgett, Harewood, Krabill (5) I&S/VLPA

BIS 217 Introduction to Debate Introduces the practice or argumentation and debate. Focuses on how to compose an argument, construct a case, methods of attack and defense, effective communication strategies, and variations in debate style. Carlisle (5) I&S

BIS 218 The Power of Maps Introduces maps, cartography, and geographic visualization, with an emphasis on digital and GIS maps on the web. Addresses maps and human understanding, map abstraction and generalization, and key map elements. Jung (5) I&S

BIS 219 The Politics of Sex Education Examines the history and politics of sex education, reproduction, and sexual health in the United States, with cross national/regional comparisons. Explores how various cultural and ideological positions bring about different concepts of sexuality, the body, rights, personhood, and social and global responsibility. Lerum (5) I&S

BIS 220 Developmental Psychology Overview of the physical, cognitive, emotional, and social aspects of human development. Facilitates a greater understanding of children, adolescents, and adults as they develop and change over time in specific cultural contexts. (5) I&S

BIS 221 Gender and Sexuality Explores gender and human sexuality by focusing on diversity and development. Considers behavioral, social, historical, and cultural aspects. (5) I&S

BIS 223 Introduction to Narrative Ethnography Introduction to narrative ethnography. Focuses on the making of narrative ethnographic knowledge (observing, asking, listening, analyzing, writing up) through experiential exercises. (5) I&S

BIS 224 Introduction to Feminist Studies Introduces feminism as it developed over the last two centuries. Investigates theories of gender and power, including the sources of and solutions to gender inequality, and how gendered identities have been produced, questioned, and critiqued. (5) I&S, DIV

BIS 225 Social Psychology Analyzes contemporary research in social psychology and how that research informs social issues including conformity, propaganda, prejudice, attraction, and aggression. Focuses on a person's relationship with other people, how he or she influences them and is influenced by them. Stewart (5) I&S

BIS 226 Foundations of U.S. Social Service Introduces the field of social services in the U.S., including its organization, forms of professional practice, and historical development. Focuses on social welfare: theory, court decisions, case studies, and policy. Considers competing assumptions about and approaches to solving social problems. Carlisle (5) I&S

BIS 230 Mathematical Thinking for the Liberal Arts Develops mathematics from historical, intellectual, and applied perspectives. Designed to broaden concepts of the meaning of mathematics, develop mathematical thinking, and encourage the use of mathematics in meaningful applications. (5) NW, QSR

BIS 231 Linear Algebra With Applications Introduction to linear algebra (i.e., concepts, tools, and operations related to matrices and vectors) with emphasis on interdisciplinary applications. Provides an introduction to the mathematical concepts, arguments, and proofs that occur in linear algebra. Prerequisite: BCUSP 124, B MATH 144, or STMATH 124 C. HILLYARD (5) NW, QSR

BIS 232 Introduction to Data Visualization Introduces descriptive statistics and visual representations of quantitative data. Examines data sets using graphing and statistical software packages. Demonstrates how to present data in ways that are accurate, effective, and visually appealing. Hillyard, Littig (5) NW, QSR

BIS 233 Participatory Media Culture Develops new media literacies that enables students to navigate,

critique, and actively participate in the development of new media forms. (5) VLPA/I&S

BIS 235 Critical Media Literacy Explores how contemporary media communicate and produce meaning with the goal of developing students' abilities to engage critically with their various media environments. Examines, interprets, and evaluates technologically mediated communications in order to critically assess their social, cultural, and political meanings and implications. S. Harewood, R. Krabill (5) I&S

BIS 236 Introduction to Interactive Media Explores the role of interactive media in shaping society and culture. Gregory (5) VLPA/I&S

BIS 237 Public Speaking and Communication Introduces students to a range of approaches to effective public speaking in professional and personal environments. Emphasizes the use of reflective practice in evaluating and improving arguments with attention to evidence, audience, and social context. (5) VLPA/I&S

BIS 238 Language, Identity, Culture, and Power Explores the relationship between language, identify and power by examining social, cultural and historical perspectives on language and identity in the United States. (5) I&S, DIV

BIS 240 Introduction to Sustainable Practices Introduces contemporary practices of environmental sustainability. Examines permaculture, sustainable building, life cycle analysis, renewable energy, soil amendments, and recycling. Provides hands-on experience in the implementation of sustainable practices. (5) I&S/NW

BIS 241 Nature in the Northwest Examines local and regional ecosystems and their interaction with human communities. Applies approaches from the environmental sciences and the practice of natural history to develop an understanding of ecosystem functions, organisms, and their relationships. M. GROOM, D. STOKES (5) NW

BIS 242 Environmental Geography Investigates the interactions of a dynamic planet and society. Analyzes geographic variability and the human consequences of environmental phenomena such as climate, natural resources, natural hazards, and infectious diseases. Emphasizes the application of geographic tools and methods. Turner (5) I&S/NW

BIS 243 Introduction to Environmental Issues Introduction to the major environmental challenges confronting society, and the science of understanding and addressing those challenges. Provides an overview of major issues such as global climate change, biodiversity loss, and sustainability; as well as in-depth understanding of specific issues. Stokes, Turner (5) I&S/NW

BIS 244 Wetlands Discovery Provides an experimental introduction to environmental science, education, and policy through an exploration of wetland ecosystems. Explores how humans interact with wetlands ecosystems. Stresses active learning in relation to the campus Wetlands. R. TURNER (2-3) NW

BIS 250 How Things Work: Motion and Mechanics Introduces basic scientific concepts needed to understand technologies encountered in everyday life. Themes may include the physics of motion and thermodynamics, and the applications in heating/coming and transportation. Readings focus on the history of science and invention. (5) I&S/NW

BIS 251 How Things Work: Electricity and Invention Introduces basic scientific concepts needed to understand technologies encountered in everyday life. Focuses on electricity and its applications in various electronic devices, appliances, and systems. Readings in the history of technology develop the context in which discovery, invention, and innovation unfold. (5) I&S/NW

BIS 252 Politics of Science Explores the cultural politics of scientific practice with particular attention to toxic exposure, biomedical research, genetic science, and constructs of race and gender.

Investigates how social and scientific "truths" are negotiated through normative understandings of the body. Considers the powerful role of doubt and uncertainty in scientific knowledge production. S. Cram (5) I&S, DIV

BIS 255 Critical Diversity Studies Introduces theories, concepts, research, and polices that provide a foundation for exploring connections between diversity and equity and for recognizing ways in which these connections are relevant to individuals, institutions, and the world. Offered: jointly with B EDUC 255; Sp. J. MURR (5) I&S, DIV

BIS 256 Introduction to African American Studies Introduces the history, culture, and politics of people of African descent in inside and outside the United States. (5) I&S, DIV

BIS 257 Introduction to Asian American Studies Introduces the histories, cultures, and politics of Asian Americans. Draws from history, literature, humanities, philosophies, the arts, film, and related areas of inquiry to examine power and politics in the Asian American experience. (5) I&S, DIV

BIS 258 Introduction to United States Latina/Latino Studies Introduces the history, culture, and politics of people of Latin descent in local and global context. Draws from history, literature, humanities, philosophy, the arts, film, and related areas of inquiry. (5) I&S, DIV

BIS 260 Introduction to World Religions Explores the world's major religious traditions. Stresses the wide range of perspectives within each tradition, their porous boundaries, contested beliefs, and multiple practices as they have adapted to new circumstances and the needs of changing communities over time. (5) I&S

BIS 261 Introduction to Film Studies Provides an introduction to cinema as an artistic medium, as a source of entertainment, as a platform for cultural critique, and as a cluster of social institutions with significant political and economic power. (5) VLPA

BIS 263 Literature into Film Studies the process of artistic adaptation by examining how significant literary works are translated into the medium of film. Explores the respective strengths and possibilities as well as the unique challenges, of literary and cinematic communication. Behler (5) VLPA

BIS 264 Africa on Film Introduces historical and contemporary issues facing the continent of Africa through an examination of films dealing with African themes. Addresses the strengths and weaknesses of how African issues are depicted within and outside the continent. K. LEISSLE (5) VLPA/I&S

BIS 265 Introduction to Comparative Ethnic Studies Focuses on differences of power, perspective, and privilege of racial and ethnic groups within and beyond the United States. Explores opportunities and strategies for alliance and coalition historically and into the present. Stresses diverse interpretive and methodological approaches. (5) I&S, DIV

BIS 266 United States History to 1865 Examines key events and problems in U.S. history from European-Native American contact to the end of the Civil War. Focuses on the practice of "doing history" by applying historical thinking skills to a wide range of primary documents. (5) I&S

BIS 267 United States History from 1865 Examines key events and problems in U.S. history from the Civil War to the recent past. Focuses on the practice of "doing history" by applying historical thinking skills to a wide rage of primary documents. (5) I&S

BIS 268 Problems in World History to 1500 Surveys problems in world history up to 1500. (5) I&S

BIS 269 Problems in World History after 1500 Surveys problems in world history from 1500 to present. (5) I&S

BIS 270 Abnormal Psychology General instruction to the study and treatment of psychopathology. Covers research on and theories about definitions and "causes" of psychological problems from a variety of perspectives. Addresses some of the major classes of

mental health problems, such as mood and anxiety disorders, their causes and treatment. J. STEWART (5) I&S

BIS 275 Social Problems Explores how challenges to society; such as crime, violence, injustice, poverty, and disease; are framed as social problems and then related to solutions. Examines the role of major institutions in problem identification, the power of language and media, and how social agendas are determined. (5) I&S

BIS 280 U.S. Political Processes Studies interaction between U.S. governmental institutions at all levels and civil society. Examines a variety of theoretical viewpoints and the relationships between private and public institutions, behaviors, and traditions. (5) I&S

BIS 281 Contemporary Political Ideas and Ideologies Explores different views on the purpose of government and nature of human society. Concepts examined include democracy, freedom, equality, justice, nation, and community; ideologies examined may include cosmopolitanism, nationalism, liberalism, anarchism, conservatism, and socialism. C. Danby (5) I&S

BIS 282 Globalization Investigates different meaning of the claims about globalization, a term often used to describe processes of change that take place across and outside of national contexts. Critically examines contemporary global processes in order to explore their impacts on our lives. (5) I&S

BIS 283 Introduction to Law Introduction to the structure of the legal system. Covers how the United States legal system reflects and forms social values; resolves disputes; deals with criminal procedures; addresses torts and contracts; and examines the functioning of the Constitution. Offered: AWSp. (5) I&S

BIS 284 International Relations Surveys basic themes in international relations within the context of diplomatic history and American foreign policy. Emphasizes basic motivational drives of world politics, including national interests, ideology, morality, and nationalism. Discussion of war, diplomacy, American foreign policy, and international organization sheds light on the perennial struggle for power among nations, the security dilemma and instruments of global cooperation. (5) I&S

BIS 285 Seminar in Biology Supervised readings and group discussion on a specific area of biology. Topics vary with instructor. Offered: jointly with B BIO 285. (3, max. 9) I&S/NW

BIS 290 Research in Action Introduces research practices, methods, and processes in the different (inter)disciplines represented on the UW Bothell campus. Students develop skills necessary to be successful scholars and researchers and learn about research that is being conducted by the UW Bothell faculty. Offered: AWSp. Rasmussen (2, max. 6)

BIS 293 Special Topics Examines different subjects or problems from an interdisciplinary framework. (2-5, max. 15)

BIS 294 The Arts of Collaboration: Working in Teams Explores the theoretical foundations for effective team leadership, collaboration, and shared decision making. Develops team leader and member competencies. (5)

BIS 295 Community-Based Practice Links academic study to experiential and community-based learning conducted at on- or off-campus sites. Topics and sites may vary with instructor. (5, max. 15)

BIS 300 Interdisciplinary Inquiry Introduction to advanced work in interdisciplinary studies centered on broadly based questions and problems. Stresses the skills necessary to engage in upper-division research and learning in the Interdisciplinary Arts and Sciences Program. (5)

BIS 301 Narrative Forms Examines the form, function, and textual conventions of such narrative forms as (auto) biography, personal experience narratives, short stories, and novels. Explores literary language

useful for discussing narratives, how narratives work for their readers/listeners, and what interpretive tools readers/listeners bring to narratives. (5) VLPA

BIS 302 Issues in Mathematics Across Cultures Examines the role of mathematics in informing and shaping human understanding of the world. Explores contemporary and historical issues in the development and application of mathematical theories and philosophies. Focus varies with instructor and may include ethnomathematics, women in mathematics, media representations of the mathematical sciences, and mathematics and warfare. C. HILLYARD (5, max. 10) I&S

BIS 305 Issues in Social and Political Philosophy A philosophical investigation of conceptual and normative issues associated with one of several broad domains of social and political thought: human rights, the varieties of human conflict, and war and peace. Examines both classical and recent texts. Brings theoretical perspectives to bear on contemporary issues. (5, max. 10) I&S

BIS 306 Marine Diversity and Conservation Exploration of marine biodiversity of the Pacific Northwest. Basic concepts in evolution, development, ecology, and conservation are introduced through inquiry-guided exercises based in the marine environment. Examination of human impacts on marine environments and subsequent consequences for human health and welfare. (5) I&S/NW

BIS 307 Environmental Justice Explores issues of social equity associated with environmental hazards, risks, and benefits. Examines the ways social structures, environmental decision-making procedures, and scientific and technological practices distribute the burden of environmental problems, as well as community response through political action and cultural production. J. ATKINSON (5) I&S

BIS 308 Issues in Philosophy and Culture Examines a central problem associated with the nature, varieties, values, and transmission of cultures. Alternative problems to be emphasized include the cultural relativity of truth and value, multi-cultural education, and knowledge and practice. Emphasizes philosophical texts. Also considers writings from sociology, anthropology, history and literature. (5, max. 10)

BIS 309 History of Dance in Europe and America Discussion of the major developments in European and American dance history. Dances from the court, ballroom, and theater including masterpieces from the modern repertoire. Based on primary source material and film recreations that document dance's social and theatrical role from the Renaissance to the present. (5) VLPA

BIS 310 Women, Culture, and Development Facilitates a critical understanding of the social, cultural, political, and economic positions of women in the developing world. Addresses colonialism and post-colonialism, feminist theories of development, and practices of globalization. Shayne (5) I&S, DIV

BIS 312 Approaches to Social Research Deals with the why and how of social research. Covers two main themes: the epistemology of social science and the logic of research design. Students learn to assess the strengths of various methodologies, evaluate research results, and initiate future inquiries of their own. (5) I&S

BIS 313 Issues in Media Studies Examines a variety of issues involved in understanding different forms of media and their impact on our lives, in contexts spanning from local to global, using a wide range of theoretical, disciplinary, and methodological approaches. (5, max. 15) VLPA/I&S

BIS 314 Topics in Geography Topics/areas of study may include: cultural geography, physical geography, geography of globalization. (5, max. 10) I&S

BIS 315 Understanding Statistics Presentation of key concepts for understanding and judging reports of statistical analyses and for performing and reporting valid statistical analyses using a limited set of measures and tests. (5) I&S/NW, QSR

BIS 316 Topics in Psychology Examination of a specific topic in order to provide a deeper understanding of a particular aspect of psychology. Topics may include the history of psychology; human memory; dreaming; cognitive psychology. (5, max. 15) I&S

BIS 317 Language, Society, and Cultural Knowledge Explores the determining role of language in human communication, culture and worldview; and the implications of language structure and content to forms of communicative interaction. Review and critique of theories of language as a social phenomena. (5) VLPA/I&S

BIS 319 Public Arts and Ecological Restoration Explores the intersection of public art and ecological restoration. Examines how the natural environment informs human identity and how humans have transformed the environment. Provides an understanding of environmental challenges related to artistic representations of nature and some of the possible opportunities for solving them. (5) NW/VLPA

BIS 320 Comparative Political Economies Examines the production and distribution of goods, the organization of labor, and systems of wealth and power in diverse cultural settings within and outside the realm of "classical" capitalist development. Analyzes interactions between political constituencies and the economies they attempt to govern. (5) I&S

BIS 321 Human Rights and the Arts Examines the relationship among politics, legal realm of rights, and aesthetics, with a focus on one or more art forms. (5) I&S/VLPA

BIS 322 Topics in Performance Studies Examination of a specific topic in order to provide a deeper understanding of a particular aspect of the study of performance. Topics may include transnationalism and performance; eco-performance, community performance; African and Asian theatre. Topics and approaches may vary with instructor. (5, max. 15) VLPA

BIS 323 History of Photography Examines the history of world photography with an emphasis on European, North American, and Latin American photography. Offered: AS. (5) VLPA/I&S

BIS 324 Gender, Human Rights, and Global Cinema Examines cinematic narratives of human rights violations across the world, with a special focus on gender. Students will examine films in major filmmaking centers globally. Central to our discussions will be an application of interdisciplinary and critical perspectives on gender, human rights, social justice, postcoloniality, migrancy, borders, and race. A. Kurian (5) VLPA/I&S, DIV

BIS 325 Disability and Human Rights Considers the intersections between human rights discourse and disability studies in relation to questions of community formation and social action. Addresses three primary areas: the arts, activism, and the law. (5) VLPA/I&S, DIV

BIS 326 Race, Space, and Segregation Explores intersections between race, human space (i.e, perceived, conceived, and lived), and segregation through law, policies, and other institutional practices. Focuses primarily on US locations/cases in historical and comparative perspectives. Topics include spatial control during settler colonization and slavery, Jim Crow segregation, ghettoization, the border, and environmental racism. (5) I&S

BIS 327 History of U.S. Labor Institutions Examines the evolution of the institutions that have shaped labor. Discusses indentured servitude, slavery, apprenticeship, schooling, wage labor, unions, and the laws that surround each of these institutions. (5) I&S

BIS 328 Diversity, Leadership, and Engagement Explores theories and practices of diversity, leadership, and engagement. Provides opportunity for leadership development and academic reflection in relation to initiatives in which students work on questions of diversity and campus or community

engagement. Recommended: BIS 255/B EDUC 255. Offered: jointly with B EDUC 328. (1-5, max. 20) DIV

BIS 329 Topics in Mathematics Across the Curriculum Examines mathematical theories and concepts within their historical and cultural contexts. Topics vary with instructor and may include mathematical symmetries, the organization and modeling of space, cryptology, mathematical models of social decision making, and/or theories of change and strategy. (5, max. 10)

BIS 330 Democratic Capitalism in the United States Critical examination of the relationship between three political perspectives (libertarian, liberal and radical) and democratic capitalism. (5) I&S

BIS 331 Journalism and Media History Examines histories of journalism, media and communication. Emphasizes important trends, moments, decisions, and issues in United States journalism's more than 200-year history. Addresses ideologies, practices, law, ethics, technologies operating within journalism and media culture. K. GUSTAFSON (5) I&S/VLPA

BIS 334 Traditional Chinese History History of traditional China from earliest times to the beginning of the Qing dynasty. Covers the birth and development of the principal social, economic, and political institutions in China. Also treats the principal cultural and scientific achievements of China, and the philosophical traditions which have dominated East Asia. (5) I&S

BIS 335 Human Rights in America Study of the literature of civil liberties, civil rights, and human rights in the United States. Examines the way writers try to justify specific rights and to communicate the need for social change in American society. (5) I&S, DIV

BIS 336 History of Mass Incarceration in the United States Explores the rise of mass incarceration across economic, legal, political, and social terrains. The class situates mass incarceration in a longer history of American approaches to punishment and includes a focus on how these issues have manifest in Washington state. D. Berger (5) I&S, DIV

BIS 337 Risk and Resilience Provides an overview of the psychological study of development in the context of adversity. Studies pathways that lead to maladjustment and processes that lead to positive adjustment, and considers social policy and preventative programs. Udell (5) I&S

BIS 338 Political Institutions and Processes Studies the nature, structure, and functions of political institutions. Develops a theoretical and empirical analysis of both formal (state and government) and informal (non-state) institutions and actors: (5) I&S

BIS 339 Issues in Global Cultural Studies Examination of various topics and approaches to the study of culture in a global context. May include the study art, literature, theater, cultural history, music history/ethnomusicology, and/or cultural anthropology/geography. Topics and approaches may vary with instructor. (5, max. 15)

BIS 340 Approaches to Cultural Research Examines different approaches to understanding the production and consumption of culture and cultural practices. Invites students to evaluate cultural research, to experience with different research methodologies, and to carry out research assignments. Explores ethnographic, textual, and arts-based methods. B. BURGETT, B. GARDNER, K. LERUM (5) VLPA/I&S

BIS 341 Topics in the Study of Culture Examines the study of cultural forms, artifacts, and practices. May include art, art history, literature, theater, music history, ethnomusicology, dance, and/or religion. Topics and approaches may vary with instructor. (5, max. 15)

BIS 342 Geographic Information Systems Examines the concepts and methods of geographic information systems (GIS) and related elements of spatial analysis and representation. Through projects and lab exercises, student gain basic proficiency in the use of

GIS and an interdisciplinary understanding of the applications of GIS. J. JUNG, S. LOPEZ (5) I&S

BIS 343 Geographic Visualization Focuses on different geovisualization techniques to represent physical, social, and cultural phenomena associated with spatial data and designing maps. Addresses GIS programs and explores how geovisualization can be applied to various research and policy areas. J. JUNG, S. LOPEZ (5) I&S, QSR

BIS 344 Intermediate Geographic Analysis and Applications Provides intermediate level training in Geographic Information Systems (GIS) for the analysis of environmental and spatial data. Emphasizes on the applications of raster and vector modeling to map and analyze geo-spatial phenomena, and proposes solutions to environmental problems. Prerequisite: BIS 342 or equivalent course or instructor's permission. (5) NW, QSR

BIS 345 American Environmental Thought Explores the development of current ideas about nature and the relationship between humans and the natural world, as expressed in literature and other cultural forms. Emphasizes historical, cultural, philosophical, and global dimensions of American environmental thought, along with implications for human interactions with the environment. J. ATKINSON (5) I&S

BIS 346 Topics in Environmental Policy Explores specific topics in environmental policy in an interdisciplinary context, combining considerations of politics, policy, economics, and science. Emphasizes quantitative analysis and scientific method. (5, max. 10)

BIS 347 History of American Documentary Films Exploration of the important technological and cinematic innovations of non-fiction films within their cultural contexts, and examination of theoretical issues such as objectivity and the blurred line between fact and fiction. Stresses the skills necessary for the critical evaluation and interpretation of documentary films. (5) VLPA/I&S

BIS 348 Cultural Psychology Addresses the ways that cultural traditions and social practices both reflect and transform psychological experience. Examines both new theoretical and empirical work in cultural psychology and the intellectual roots of cultural psychology. Explores the implications of a cultural perspective for the larger projects/concerns of the field of psychology. J. STEWART (5) I&S

BIS 349 Personality Psychology Introduces the field of personality psychology and the scientific study of psychological individuality. Addresses three key approaches to personality; basic traits; motives, goals, schemas, and tasks; and broad and culturally shaped life stories that provide identity, purpose, and meaning. Integrates classical personality theories and contemporary research in the field. Prerequisite: Not open for credit to students who have taken PSYCH 203 or PSYCH 303 at the Seattle Campus. J. STEWART (5) I&S

BIS 350 The Concept of Number Explores the concept of number from an historical perspective and the modern mathematical perspective. Stresses the new properties of "'number"', starting with counting numbers and progressing to the concept of a field. (5) NW, QSR

BIS 351 Topics in American Culture Explores a particular topic in American culture that highlights the methodological tools needed to integrate the interpretation of cultural texts, including literature, film, music, and art, with their historical contexts. (5, max. 15) VLPA

BIS 352 Mapping Communities Uses mapping and other methods to examine the concept of community. Explores the intersections of life in urban areas including perception and interaction with built environments, political and economic relationships, and social and cultural ties. J. JUNG (5) I&S

BIS 353 Human Rights in Theory and Practice Introduces political, economic, legal, and cultural

aspects of the theory and practice of human rights. Students will explore, critique, and develop theories of human rights. (5) I&S

BIS 354 Modern European Intellectual History Study of key figures and intellectual debates of Western modernity, and of major literary movements (romanticism, realism, modernism). Analysis of seminal texts such as Rousseau's Discourse on Inequality, Flaubert's Madame Bovary, Nietzsche's Genealogy of Morals, and Woolf's To the Lighthouse. (5) VLPA/I&S

BIS 355 History of Science and Technology Introduces the historical development of science and technology and their interaction with social, cultural, and political forces across time and space. (5) I&S

BIS 356 Ethics and the Environment Examination of the "environmental crisis" and associated social conflicts, tracing them to their philosophical roots. Focuses on the facts of the current situation, on classic and recent readings from the environmental literature, and on ethical responses to current issues. (5) I&S

BIS 357 Native American Religious and Philosophical Thought An exploration and comparison of religious and philosophical themes developed by tribal people in the New World; an analytical examination of various forms of religious and philosophical expression and how they relate to our human sense of an existing moral order. (5) I&S

BIS 358 Issues in Environmental Science Explores environmental problems from stratospheric ozone depletion to the preservation of endangered species to acid rain. Focuses on methods of analysis from the physical and life sciences as well as economics, psychology and related fields. Examines issues within their larger social, historic, and political contexts. (5, max. 10) I&S/NW

BIS 359 Principles and Controversies of Sustainability Focuses on the challenges, principles, and controversies of sustainability. Analyzes the sustainability issues, identifying the values underlying societal actions and conflicting perspectives, and considers the ecological, ethical, and human well-being ramifications of following different sustainability proposals and cultural trajectories. (5) I&S

BIS 361 Studies in American Literature Examines important literary movements and literary genres with attention to their historical context. Emphasizes issues of race, class, and gender. (5, max. 10) VLPA

BIS 362 The United States-Mexico Borderlands: Culture, History, Theory Focuses on the formation of the United States-Mexico border region as a process shaped by contested historical, cultural, and political forces. Examines how cultural contact, conflict, and negotiation in the borderlands have given rise to new social formations, identities, and ideologies. (5) I&S

BIS 363 Politics and Popular Music Explores the role that music has played and continues to play in political action and the contestation over political power. Focuses on key national and international political movements and examines the songs, music genres, and artists that have played important roles in those movements. (5) VLPA

BIS 364 Realities and Representations of Adolescent Development Uses research and theories from adolescent psychology to learn about adolescent development and critically evaluate the ways adolescents are depicted in society. W. Udell (5) I&S

BIS 368 Women's Lives in Context Examines gender as a psychological and social factor that influences women's experiences in different contexts. Cuts across multiple disciplinary areas by taking women-centered approaches. Emphasizes understanding of how intersections between social categories such as gender, race and ethnicity, sexual orientation, socioeconomic status, and its impact on women's psychological well-being. J. SILVA (5) I&S, DIV

BIS 370 Nineteenth-Century American Literature Examination of significant writers and literary developments within nineteenth-century American culture and society. Addresses issues surrounding the

formation of an American literary canon. Stresses themes and methods for advanced literary interpretation within American Studies. (5) VLPA

BIS 371 Twentieth-Century American Literature Examination of significant writers and literary developments within twentieth-century American culture and society. Addresses issues surrounding the formation of an American literary canon. Stresses themes and methods for advanced literary interpretation within American Studies. (5) VLPA

BIS 372 Representation, Colonialism, and the Tropical World Examines representations of the tropical world across a range of textual objects, such as painting, photography, literature, ethnography and film. (5) I&S/VLPA

BIS 373 Cultural History of Rome Intense study of the urban space of Rome as a cultural center from its origins to the modern era. Examines Roman influence over time covering the republican, imperial, and papal phases of this city as illustrated through the visual record of buildings, gardens, sculpture, mosaics, and paintings. (5) VLPA/I&S

BIS 374 Middle East Politics Examines major socio-economic and political themes in the Middle East from colonialism to the present. Topics may include: emergence of republics/monarchies, gender and patriarch in the Middle East, Arab Nationalism, Palestinian-Israeli conflict, politics of oil, and political Islam. K. DANA (5) I&S

BIS 375 Mexican Art and Culture Studies the art, politics, and culture of modern Mexico with an emphasis on 1900 to the present. D. CAPLOW (5) VLPA/I&S

BIS 378 The Language of Poetry Study of how poetic meanings are formed and interpreted. Explores different forms of poetry within diverse cultures and historical times. (5) VLPA

BIS 379 American Ethnic Literatures A comparative study of multiple ethnic literatures within American culture and society. Addresses issues surrounding the formation of an American literary canon. Stresses themes and methods for advanced literary interpretation within American Studies. (5) VLPA/I&S, DIV

BIS 380 Bioethics Explores concepts and questions in the field of bioethics and addresses key debates from different philosophical, social, and cultural perspectives. Crane (5) I&S

BIS 381 The History of Life Explores the principles of evolution by examining the fossil record, focusing on how past events shaped today's biodiversity. Engages with contemporary controversies regarding scientific literacy. Price (5) I&S/NW, QSR

BIS 382 The Visual Art of Biology Explores the intersection of biology and art through representations of nature in illustrations, photography, and film. Examines the effect of technological discoveries such as the telescope, microscope, and camera that shape and enhance our representations of nature. Price (5) VLPA/NW

BIS 383 American Art and Architecture Explores major trends in American art comprising painting, sculpture, architecture, urban design, and the decorative arts from 1600 to present. (5) VLPA

BIS 384 Health, Medicine, and Society Examines health, disease, and healing as social phenomena. Explores the nature and experience of illness through the study of patients, communities, healthcare providers, and medical systems in different cultural, social, political, and economic contexts. (5) I&S

BIS 387 Women and American Literature Study of women writers and the ways women have been portrayed in literary texts. Focuses on certain themes, such as selves and subjectivities, or on writers from specific historical, economic, ethnic, or racial backgrounds. (5, max. 10) VLPA

BIS 388 Literature in Translation Examines global literatures written in languages other than English in translation. Emphasizes cross-cultural perspectives and theories. Encourages students to think critically

about both the politics and practice of reading translated texts. (5) VLPA

BIS 389 American Indian Literature A survey of both traditional and contemporary American Indian Literary genre; oral and written modes of expression, including oral narratives, autobiography, oratory, traditional and contemporary poetry, fiction. (5) VLPA/I&S

BIS 390 Ecology and the Environment A general introduction to ecology. Introduces the principles that govern how organisms interact with each other and with their surroundings. (5) NW

BIS 391 Environmental History of the Pacific Northwest Bioregion Examines the history of the relationships between humans and their environments in the Pacific Northwest, from the time of earliest human inhabitants to the present, with particular reference to current environmental and resource issues. Stokes (5) I&S

BIS 392 Water and Sustainability Provides an understanding of past and present water challenges and some of the possible opportunities for solving them. What is the state of water in the United States and how did we get to this point? Examines the future prospects for wisely using water resources. R. TURNER (5) I&S/NW

BIS 393 Special Topics Various topics designed to respond to faculty and student interests and needs. (3-5, max. 15)

BIS 394 Comparative Economic Development Introduces a variety of issues affecting Third World economies in a framework that emphasizes their particular and varied post-colonial histories. Draws on economic theory, cultural and economic anthropology, literature, and other sources to understand institutions and sources of change in these economies. C. DANBY (5) I&S

BIS 395 Environmental Change in Washington State Examines issues in science, society, technology, and policy that impact the future of natural ecosystems and their relationship to human communities in Washington State. Issues include climate change, urban sprawl, environmental policies, management of natural resources, and loss of agricultural lands. M. GROOM, D. STOKES, R. TURNER (5) I&S/NW

BIS 396 Topics in Sustainability Examines topics in sustainability. Includes social, political, historical, cultural, artistic, economic, or scientific explorations of sustainability issues. (5, max. 15)

BIS 397 Topics in Environmental Studies Examines topics in Environmental Studies. Includes social, political, historical, cultural, artistic, economic, or scientific explorations of environmental issues. (5, max. 15)

BIS 398 Directed Study/Research Opportunity for directed group or individual research on a topic/theme mutually agreed upon by instructor and student. (1-5, max. 15)

BIS 399 Portfolio and Career Development Explores connections between academic and career portfolio development. Students assemble, critically reflect on, discuss, and present their work in these two contexts. Prerequisite: BIS 300. (2, max. 6) I&S

BIS 402 Modern China History of modern China since the beginning of the Qing dynasty, 1644 to the present. Focuses on the major social, political, and economic developments, and on the relationships between ideas and institutions. Topics include the impact of the West and changes resulting from internal causes. (5) I&S

BIS 403 Washington D.C. Seminar on Human Rights Examines human rights as a philosophical concept, an historical movement, and a contemporary political phenomenon, both in its inherently international scope and in its distinctly U.S. expression in congressional and executive-branch processes. Uses expert guest speakers, both on campus and in Washington, D.C., as major learning resources, along with readings and written assignments. (5)

BIS 405 Environmental Education Analyze various environmental programs and prepare an individualized project. Learn to apply ecological concepts in the classroom and learn how to teach about various environmental education programs. A. Lambert (5) NW

BIS 406 Urban Planning and Geography Examines historical and modern conceptualizations of "'urban"', covering topics such as urban systems, urban forms, urban ecologies, urban planning, and urbanism. Investigates the integration of built forms; human interactions; and the environmental, social, political, and economic aspects of urban places. Jung (5) I&S

BIS 407 Children's Literature and Reader Response Criticism Studies children's literature and its use in classrooms. Explores theories of reader response and the design of response-based activities. Watts (5) VLPA

BIS 410 Topics in Qualitative Inquiry Provides a background for understanding qualitative inquiry. Focuses on ethnographic inquiry and interpretative cultural analysis. Discusses forms of data collection such as observation, participant observation, and interviewing. Also stresses strategies for data analysis and for handling qualitative data. (5, max. 15) I&S

BIS 414 Topics in Human Rights Explores a critical issue of human rights theory and practice and its intersection with the other fields of thought and disciplines. Topics may include such issues as the rights of children, workers, or women; or the relationship of human rights to democracy, globalization, and the arts. (5, max. 10) I&S

BIS 415 Public Policy and Law Examines the different histories of and processes by which law and public policy create rules that govern a society. Discusses the nature and influence of law and policy in our society via a sociological perspective. (5) I&S

BIS 417 Paris: The City and Its History Explores the issues of urban culture and history in the city of Paris. Uses pertinent primary and secondary texts to explore why Paris has been regarded as the jewel of European cities and what constitutes its sense of place. (5) VLPA/I&S

BIS 418 Masculinity, Homoeroticism, and Queer Theory in American Culture Exploration of the shifting and contradictory images and ideas of masculinity in American culture, focusing especially on the way masculinities are constructed in relations between men. Emphasizes advanced methods in American Studies. (5) VLPA

BIS 419 Urban Politics and Policy Examines the historical, economic and ideological foundations for urban governance within the American political system. Compares and contrasts urban politics and public policy implementation in selected U.S. cities and regions. Special emphasis on policy issues affecting political and economic development and the distribution of political power and social benefits. (5) I&S

BIS 420 Colonizing History in Sub-Saharan Africa Considers the history of colonization in Africa and the writing of that history, dealing with debates around post-colonial theory. Provides a better understanding of how relationships between Sub-Saharan Africa and other parts of the world have developed, and how we have come to understand those relationships. (5) I&S

BIS 421 Technology Policy Examines the role of public policy in managing the tradeoffs between benefits and risks of new technology. Discusses how to evaluate U.S. technology policies against the standards of democracy, economic efficiency, and social justice. (5) I&S

BIS 422 Clinical Psychology Explores the intellectual, emotional, biological, psychological, and behavioral aspects of human functioning. Topics include maladjustment and adjustment, discomfort, disability, and adaption. Specifically addresses assessment and diagnosis; theory and strategies of intervention; ethics and standard, research methods; and training and specializations. Prerequisite: BIS 270. Stewart (5) I&S

BIS 424 Topics in American Studies Examination of a specific topic in order to provide a deeper understanding of a particular aspect of American culture. (5, max. 15)

BIS 425 Topics in U.S. Social and Political History Intensive examination of a particular topic on American institutions, ideologies, movements, and social conditions. (5, max. 15) I&S

BIS 431 Issues in Sexual Politics and Cultures Examines the ways that sexual beliefs, practices, identities, and behaviors are connected to various cultural, economic, political, and historical forces. Ideally builds on students' previous critical study of sex and sexuality, either at the UW or elsewhere. Specific focus and topic varies with instructor. (5, max. 10) I&S

BIS 433 Gender, Work, and Family Examines the interlocking institutions of gender, work, and family. Explores the impact of changing patterns of work on the lives of men and women and the effect of changes in work and occupations on demography and family patterns. (5) I&S, DIV

BIS 434 Psychology and the Visual Arts Explores the visual arts experience in many of its psychological, social, and cultural dimensions. Topics include visual perception and cognition, the process of assigning personal meaning and value to art, and the role of the visual arts in individual and community identity development and change efforts. (5) VLPA/I&S

BIS 436 Comparative Family Systems Provides comparative analyses of family life in various cultures and societies. Topics include family organization, family and kinship structure, marital and parent-child relationships, socialization, aging and familial roles. Examines methods for conducting comparative research. (5) I&S

BIS 437 Narrative Psychology Examines the ways narrative has been used in psychology theory, practice, and research. Introduces narrative concepts and analysis techniques, examines how diverse cultural contexts shape personal stories, demonstrates narrative research strengths, and explores the ways larger social narratives can affect individual actualization. (5) I&S

BIS 438 Prevention and Promotion Examines prevention and promotion, the two fundamental intervention approaches of community psychology. Explores the strategies employed for each, and the array of phenomena, or variables, they address. Focuses on applications at the small group, community, and socio-cultural levels of analysis. Prerequisite: BISCP 343. Instructors: Stewart (5-) I&S

BIS 441 Global Labor Markets Explores the history, theory, and institutions that affect labor's position in an increasingly globalized labor market. Fosters critical inquiry upon the globalization of labor markets and makes connections between global markets and local employment conditions. Prerequisite: B CUSP 200. (5) I&S

BIS 442 Advanced GIS Analysis and Applications Provides advanced training in Geographic Information Systems and other geospatial applications for display and analysis of environmental and socio-economic data. Prerequisite: BIS 342. Instructors: Jung, Lopez (5, max. 15) I&S

BIS 443 Educational Policy and the American Economy Examines relationships between the economy and our educational and training infrastructure: What are we doing and what should our educational policy be? (5) I&S

BIS 445 Meanings and Realities of Inequality A socioeconomic investigation into the meanings and realities of inequality using a variety of theoretical frameworks and empirical research. Focuses on the determinants of economic mobility and social status. Addresses discrimination, poverty, welfare, and education. (5) I&S, DIV

BIS 446 Science, Expertise, and Public Policy Addresses how we incorporate both public participation and expert advice into democratic decision-making. Acknowledges that science in necessarily value-laden and that non-scientists often

have salient knowledge, and examines how the tension between democracy and expertise has been reconciled in practices of, and proposals for, policy-making in Western democracies. (5) I&S

BIS 447 Topics in Quantitative Inquiry Examines methods for quantitative data analysis. Uses current software packages to model data. Topics vary with instructor and may include probability, surveys, regression techniques, forecasting and time series, decision-making, or spatial analysis and data maps. (5, max. 15) NW, QSR

BIS 448 Social Policy Addresses the need for and purposes of US social policy by linking policy interventions and advocacy to social welfare. Examines causes and policy solutions to social welfare issues such as poverty, income, public assistance, food and housing, mental health and substance abuse, child welfare, and social security. (5) I&S

BIS 449 Advanced Topics in Psychology Advanced study of selected theoretical and research topics of contemporary interest in psychology. Stewart, Udell (5, max. 15) I&S

BIS 452 Marx, Nietzsche, Freud Study of the challenges to the traditional Western conceptions of the self, history, knowledge, and art by these classic authors of modernity. Examines the critical impact of their writing within its historical and cultural context and the ongoing significance of their work through the study of prominent examples of contemporary theory. (5) I&S

BIS 455 Literature and Sexuality Advanced study of the changing definitions and discourses of sexuality in the nineteenth and twentieth centuries and their relationship to literary representations. Stresses historical, psychoanalytic, and literary perspectives. S. DOWLING (5, max. 10) VLPA/I&S

BIS 458 Energy, the Environment and Society Discusses energy production, distribution, and consumption in modern society. Topics include basic scientific, technological, economic, political and environmental issues and questions raised by the utilization of traditional and alternative energy sources. (5) I&S

BIS 459 Conservation and Sustainable Development Examines the connections between human welfare and diverse and healthy ecosystems. Considers tensions among economic development, poverty eradication, and biodiversity conservation. Examines efforts to create sustainable development solutions to easing poverty and protecting biodiversity. M. GROOM (5) I&S/NW

BIS 460 Topics in Critical Theory Investigates theoretical approaches to the study of literature. Topics may range from chronicles of critical theories to psychoanalysis and literature, or the examination of individual theoreticians such as Michel Foucault. (5, max. 10) VLPA

BIS 463 U.S. Women's History Surveys the place of women in the United States from Native American-European contact to the present. Topics include comparative gender norms, women's politics, gender and slavery, alliances and disagreements among women, women and work, courtship, sexuality, and marriage. (5) I&S, DIV

BIS 464 Topics in Advanced Cinema Studies Builds on the analytical and methodological skills gained in 300-level cinema studies courses. Focuses on specific topics which examine cinematic texts and institutions and their complex interrelationships within modern culture. (5, max. 15) VLPA

BIS 465 Performance, History, and Memory Investigates transnational performance forms as sites of memory, testimony, and archive. Explores the transmission of cultural knowledge in performance and how those traditions change as they travel across social, cultural, and geographic boundaries. Specific cultures examined vary by instructor. (5-) VLPA

BIS 466 Human Rights and Resistance Examines how cultural practice interacts with the modern human rights movement, exploring how cultural production such as music, literature, theater, or the visual arts

can promote the human rights regime as it resists challenges to justices and human dignity. Kochis (5) I&S

BIS 468 Human Rights and Sustainable Development Examines social aspects of a human right to sustainable development including education, democratic participation, the rule of law, human capabilities and functioning, nationality, religion, and a right to a safe environment. B. KOCHIS (5) I&S

BIS 470 Art, Politics, and Social Change Explores explicit and implicit linages among arts, activism, and social transformation at various scales. (5) VLPA/I&S

BIS 471 Women in Art Examines work of women artists and women in art. Explores women's creative production, societal roles, and feminist critiques of the roles of women in art. (5) VLPA/I&S

BIS 474 Topics in European Cultural History Advanced interdisciplinary study of major periods, prominent movements, or representative figures of European cultural history. Gives special attention to the historical contexts and meanings of cultural life, as well as to the interrelations between the arts. (5, max. 10) VLPA/I&S

BIS 476 Issues in Art History Explores diverse issues in art history such as the history of photography, painting in the age of Rembrandt, and impressionism through surrealism. (5, max. 15) VLPA/I&S

BIS 480 International Study Abroad Combines study at UW-Bothell with seminars and field trips organized by the Interdisciplinary Arts and Sciences faculty or the faculties of host institutions in foreign countries. Topics include politics, political economy, public policy, business, and literature, and the arts. (2-5, max. 20)

BIS 481 Modernism, Postmodernism, and American Literature An investigation into the multiple descriptions and definitions of Modernism and Postmodernism through the study of such twentieth-century writersas Eliot, Pound, Willi Stevens, Moore, Stein, Ashbery, Creeley, Antin, Hemingway, Dos Passos, Faulkner, Ellison, Barnes, Bowles, Paley, Morrison, and Silko. (5) VLPA

BIS 483 Community Organizing Provides a theoretical and practical approach to community organizing. Students examine the phases of the organizing process including assessment, research, action/mobilization, and reflection. Students undertake the process of organizing through a community-based learning and research project. Recommended: Recommended: either BISCP 343 or BISSEB 304. C. COLLINS (5) I&S

BIS 485 Topics in Cultural Studies Explores in depth specific historical, political, or social aspects of cultural practice. Links this analysis to an examination of the processes involved in doing various forms of cultural work. (3-5, max. 15)

BIS 486 Studies in Women and Literature Advanced study concentrating on individual or a group of related women writers with attention to such subjects as women and language, feminist literary criticism, and canon formation. (5, max. 10) VLPA

BIS 487 Topics in American Literature Advanced study in American literature concentrating on individual writers, literary movements, specific critical approaches to literature, or literary canons and their critics. (5, max. 10) VLPA

BIS 488 Topics in British Literature Advanced study of significant authors, issues and movements in English literature. Topics include Shakespeare and the idea of tragedy, Virginia Woolf as artist and cultural critic, and canon formation and the Romantic movement. (5, max. 10) VLPA

BIS 490 Advanced Seminar Study of special topics in interdisciplinary arts and sciences. Prerequisite: BIS 300. (5, max. 10)

BIS 491 Topics in Policy Studies Explores in depth a specific topic in policy analysis and implementation. Topics include environmental policy, educational policy, cultural and arts practices, labor policy, and health care policy. (3-5, max. 15)

BIS 492 Senior Thesis A significant independent research project planned and carried out by the student under the direction of two or more faculty on a significant scholarly topic selected by the student in consultation with thesis advisor. (5-, max. 10)

BIS 493 Special Topics Advanced course offerings designed to respond to faculty and student interests and needs. Topics include French Impressionism, social movements in late nineteenth-century Japan, international business and the changing European economic structure. (3-5, max. 15)

BIS 494 Task Force (2-5, max. 15)

BIS 495 Internship Credit/no-credit only. (2-6)

BIS 496 Community Service Project In conjunction with faculty adviser, students develop and implement a community service-learning project. Involves activities such as assistance to disadvantaged populations, community outreach programs, policy analysis, or related work intended to improve the quality of life in the community. Includes academic study designed to integrate practical applications with learning and theory. Credit/no-credit only. (3-15, max. 15)

BIS 497 Political Internship in State Government Students serving in approved internship program with state government agencies. (5, max. 20)

BIS 498 Undergraduate Research Individual advanced research on topics conducted under the direction of one or more instructors. (1-5, max. 15)

BIS 499 Portfolio Capstone Focuses on developing a learning and professional portfolio, advancing skills of critical thinking and interdisciplinary synthesis, and honing writing and presentation capacities for appropriate audiences. Stresses collaboration with other graduating students. Prerequisite: BIS 300. (3)

Interdisciplinary Studies Skills

BISSKL 250 Career Exploration Explores issues, topics, and tasks related to personal, educational, and career choices. Addresses educational and career planning, personal characteristics and individual preferences, life and work values and interests, decision making, goal setting, and job/career search preparations. Credit/no-credit only. (2)

BISSKL 302 Team Building Introduces a theoretical and experiential understanding of team development, consensus decision-making, sharing values, diversity, facilitation, conflict resolution, and dialogue. Theory is based on emerging views of teams and organizations as self-organizing systems. (2)

BISSKL 350 Independent Fieldwork Independent fieldwork in community agencies, apprenticeships, internships, as approved for College of Arts and Sciences credit. Faculty sponsor and internship supervisor are required. Credit/no-credit only. Offered: AWSpS. (1-6, max. 18)

BISSKL 351 Community-Based Learning Independent study conducted in organizations in our communities, complementing a designated course. (2-5, max. 15)

BISSKL 375 Academic Research and Writing Seminar Using a research project from another course students refine writing skills and expand skills in accessing, identifying, and critically evaluating information. Must be concurrently enrolled in another IAS course. Credit/no-credit only. (2)

BISSKL 377 Quantitative Reasoning Strengthens quantitative reasoning and develops problem solving and critical thinking skills through studying mathematics that can be used in everyday lives and careers. (2, max. 4)

BISSKL 400 Policy Journal Editorial Board Students nominated by faculty may participate on the editorial board of the Policy Journal. Board members are responsible for managing the content and production of the Policy Journal which is produced at least once per year, with the possibility of additional volumes if sufficient numbers of quality submissions are received. Credit/no-credit only. (2, max. 10)

BISSKL 402 Peer Facilitation Provides direct experience in teaching and facilitation. Students gain in-depth background on subject material along with training in teaching techniques and facilitation approaches. Credit/no-credit only. (2-5, max. 10)

American Studies

BISAES 305 Power, Dissent, and American Culture Focuses on the relationships between power, inequality, resistance, and difference in the United States. Examines the concept of America through intersecting categories of race, gender, sexuality, class, place, citizenship, slavery, nationalism, empire, immigration, and social change. Uses diverse sources to study culture, politics, and history. Prerequisite: Either BIS 216, BIS/BEDUC 255, BIS 256, BIS 257, BIS 258, or BIS 265. A. PADILLA, C. WALSH (5) VLPA/I&S, DIV

BISAES 363 Conflict and Connection in the Americas Examines the Americas as a geographical and historical region. Applies a variety of approaches to specific topics and events, with particular attention to the interplay of politics and culture. Stresses interaction of local, regional, and global dynamics such as colonialism, migration, and slavery. Stresses diverse interpretive approaches within American Studies. (5) I&S

BISAES 364 Public Memory and Dissent in American Culture Examines in detail one (or more) case of social, political, legal, and/or cultural conflict, focusing on how it has been remembered, reconstructed, and reimagined, both textually and institutionally. Stresses diverse interpretive and methodological approaches within American Studies. (5) VLPA/I&S

BISAES 367 Exploring American Culture: Race, Ethnicity, and Immigration Examines how contested discourses of racial, ethnic, and national difference have shaped ideas about citizenship and "American" identities. Focuses on the relationship between these discourses and social, economic, and political practices and policies. Stresses diverse interpretive approaches within American Studies. (5) VLPA/I&S, DIV

BISAES 368 Sex, Love, Romance Examines how ideologies and practices of sex, love, and romance have structured American political relations and everyday life. Focuses on the relationship between public and private life, social and gender roles, race and reproduction, among other topics. Stresses diverse interpretive approaches and methodologies within American Studies. (5) VLPA/I&S, DIV

BISAES 369 American Culture and Mass Media Combines an introduction to analytical methods for understanding mass media with the critical study of American cultural practices and structures. Applies analytical tools to a multimedia production. (5) I&S

Community Psychology

BISCP 343 Community Psychology Examines the historical foundations, theory, methods, and practice that constitute the interdisciplinary field of community psychology. Students build upon an existing empirical knowledge base, including effective modes of community intervention, and examine the relevance of community psychology for addressing social problem. (5) I&S

BISCP 489 Projects in Community Psychology Provides the opportunity to apply concepts from BIS 343 in a relevant organizational setting, to engage in a meaningful community-based intervention or research project, and to critically reflect on the project as it is conceived and carried out. Prerequisite: BISCP 343. (5)

Culture, Literature, and the Arts

BISCLA 318 Performance, Identity, Community, and Everyday Life Examines performance in everyday life, dance, theater, community-based arts practices, and/or new media from a variety of perspectives. Considers how performances act as sites for the revisioning of identity, community, and cross-cultural exchange. (5) VLPA/I&S

BISCLA 380 Arts in Context Considers literary, visual, performing art forms and traditions set within their specific political, historical, social, religious, or philosophical, and aesthetic contexts. Encourages students to explore original sources and scholarly research, building understanding and awareness of visual, literary, and kinetic analysis and interpretation. (5, max. 15) VLPA/I&S

BISCLA 384 Literary and Popular Genres Examines the conventions that define genres and their historical evolution. Focuses on one or two genres taken from the traditional modes of lyric poetry, tragedy and comedy, and epic, or from the popular forms of gothic romance, detective and mystery stories, and journalistic fiction. (5, max. 10) VLPA

Environmental Science - Bothell

BES 301 Science Methods and Practice Overview of the scientific method, emphasizing the development of testable hypotheses, scientific writing and analysis. (5) NW, QSR

BES 303 Environmental Monitoring Practicum Provides an introduction to the principles and methods of environmental monitoring and analysis. Field and laboratory studies provides experience with monitoring equipment and rigorous sampling techniques; enhance understanding of the range and variability of environmental parameters; and develop abilities in the quantitative analysis, interpretation, and presentation of data. Turner (2) NW, QSR

BES 311 Environmental Chemistry Uses fundamental chemical principles to examine fate, reactivity and transport of environmental pollutants. Emphasis given to atmospheric pollution, chemistry of natural and polluted waters, soil chemistry, chemistry of organic and inorganic toxins. Prerequisite: B CHEM 143. (5) NW, QSR

BES 312 Ecology Introduces major concepts of ecology and relates these concepts to current environmental issues. Topics include the relationship between organisms and the physical environment, evolutionary processes, the structure and function of ecosystems, population biology, forest management, pesticide use, and global warming. Prerequisite: B BIO 180. (5) NW

BES 316 Ecological Methods Introduces students to methods used in the analysis of ecological systems and their processes. Employs data analysis tools, graphic presentation, and scientific writing in the presentation of results from laboratory and field studies. Includes lectures, laboratory work, and field investigations. Prerequisite: BES 312. (5) NW

BES 317 Soils Laboratory Introduces the types of soils analyses necessary to understand the physical and chemical state of soils. Includes an introduction to soils in general, and local soils in particular. Prerequisite: B CHEM 153. (5)

BES 318 Hydrogeology Examines details and mechanisms of the natural processes associated with the hydrologic cycle. Explores rivers, groundwater, and watershed management issues within Washington State. Turner (5) NW, QSR

BES 321 Geomorphology Provides an overview of the science and geomorphology, emphasizing field observations, data collection, and data analyses associated with geomorphological methods. Examines how landforms evolve, how landforms and abiotic processes influence ecosystems, and how human activities are impacting all of the above. (5) NW

BES 330 Limnology Explores the interaction among physical, chemical, and ecological systems in lakes with a focus anthropogenic change in local and regional lakes. Entails collaborative fieldwork component in water quality. Prerequisite: B CHEM 143 and B CHEM 144. (5) NW

BES 331 Estuarine Science and Management Provides an overview of the formation, circulation, water quality, ecology, and environmental problems of estuaries. Students investigate the unique environments and processes of the Puget Sound watershed and interact with community members to

learn about Puget Sound advocacy, management, research, and education efforts. (5) NW

BES 341 Natural Hazards and Human Disasters Investigates the distribution and impacts of natural hazards and what controls the magnitude and frequency of these events. Examines how cultural and social factors influence the hazard vulnerability of populations. (5) I&S/NW

BES 362 Introduction to Restoration Ecology Introduces ecological restoration of damaged ecosystems. Develops a broad understanding of restoration ecology, including diverse ecological aspects of the practice of restoration, conceptual and philosophical issues underlying the field, and social and political factors that influence restoration outcomes. Includes field work, lectures, readings, and discussion. (5) I&S/NW

BES 397 Special Topics in Environmental Science Unique course offerings designed to respond to faculty and student interests. Possible topics may include economic and environmental issues, air pollution, water quality, ecological restoration, global warming, or conservation biology. (3-5, max. 15)

BES 398 Directed Study in Environmental Science Opportunity for directed group or individual research on a topic mutually agreed upon by instructor and student. (1-5, max. 15)

BES 415 Advanced Environmental Measurements Laboratory Analysis of air, water, and soil samples using advanced methods. Instrumental methods include: atomic absorption spectroscopy and liquid chromatography. Prerequisite: BES 311, BES 315. (5)

BES 439 Computer Modeling and Visualization in Environmental Science Addresses the ways scientists use computer simulations and modeling. Uses case studies from problem areas such as global climate change, regional air and water pollution, and the interaction between biological species and their environment. (5) NW, QSR

BES 440 Remote Sensing of the Environment Studies digital image processing and aerial photography interpretation within the context of Geographic Information Systems and Science (GISci). Focuses primarily on the use of satellite imagery and aerial photography to study the environment. (5) NW, QSR

BES 460 Water Quality Examines the chemical and physical processes that influence the fate of nutrients and contaminants in natural surface, ground, and soil waters. Addresses basic environmental chemistry in natural waters and soils, potentially important inputs, transformations and movement, and the environmental impacts of nutrients and contaminants. (5) NW, QSR

BES 462 Restoration Ecology Capstone: Introduction First of a three-course capstone sequence in restoration ecology. Students review and assess project plans and installations. Class meets with members of previous capstone classes to review their projects. Offered: jointly with ESRM 462/T BIOL 462. (2-) NW

BES 463 Restoration Ecology Capstone: Proposal and Plan Student teams prepare proposals in response to requests for proposals (RFPs) from actual clients. Clients may be governments, non-profit organizations, and others. Upon acceptance of the proposal, teams prepare restoration plans. Prerequisite: ESRM 462. Offered: jointly with ESRM 463/T BIOL 463. ((3)-) NW

BES 464 Restoration Ecology Capstone: Field Site Restoration Teams take a restoration plan developed in ESRM 463 and complete the installation. Team participation may include supervision of volunteers. Teams prepare management guidelines for the client and conduct a training class for their use. Prerequisite: ESRM 463. Offered: jointly with ESRM 464/T BIOL 464. ((5)) NW

BES 485 Conservation Biology Exploration of the science underlying methods of species and ecosystem conservation. Emphasis is placed on understanding the limits and promise of scientific

approaches to conservation, within the social, political and economic context of conservation problems. (5) NW

BES 486 Watershed Ecology and Management Overview of the ecology and management of watersheds. Explores physical, biological, and ecological components of watersheds and their interrelationships. Examines human and natural impacts on watersheds, and planning and management through theory and case studies. Prerequisite: either BIS 390 or BES 312. (5) NW

BES 487 Field Lab in Wildland Soils and Plants Provides direct field study of alpine soils and plants. Identify soils and landscape/vegetation changes in remote areas where little information is available about these ecosystems. Experience climate, relief, and parent materials that form soils and their associated plant communities. (3) NW

BES 488 Wetland Ecology Examines wetland types and their distribution as well as wetland functions for habitat and human resources. Emphasizes the ecology and adaptations of wetland plants and their interaction with soils and biogeochemical processes. Discusses human impacts, wetland regulation, and management approaches. Required field trips. Prerequisite: BES 312. (5) NW

BES 489 Pacific Northwest Ecosystems Examines major ecosystems of the Pacific Northwest to understand the structure, function, and location of these characteristic ecosystems in our region. Investigates the intersection of ecological knowledge, environmental policy and management strategies in selected ecosystems. (5) NW

BES 490 Pacific Northwest Plants in Restoration and Conservation Examines plants of the Pacific Northwest commonly used in ecological restoration and habitat conservation. Topics include the ecology, propagation, distribution, restoration use, ethnobotany, and habitat values of major species. Includes required field trips and field study. (5) NW

BES 491 Undergraduate Research in Environmental Science Capstone course. Independent research projects in an area of environmental science, based on mutual agreement with the instructor. Prerequisite: BES 311; BES 312. (5, max. 10)

BES 492 Capstone Research in Environmental Science I The first course of a two-quarter capstone sequence. Students plan and develop a detailed proposal for their capstone environmental science project. (3)

BES 493 Capstone Research in Environmental Science II Second course of a two-quarter capstone sequence. Completion of projects planned in the previous quarter. Prerequisite: BES 492. (7)

BES 497 Special Topics in Environmental Science Topics may include economic and environmental issues, air pollution, water quality, ecological restoration, global warming, conservation biology or other topics. (3-5, max. 15)

BES 498 Independent Research in Environmental Science Individual advanced research conducted under the direction of one or more instructors. (1-5, max. 15)

Gender, Women and Sexuality Studies

BISGWS 301 Critical Gender and Sexuality Studies Explores how sex, gender and sexuality studies has emerged. Examines intersections of gender and sexuality with race, ethnicity, dis/ability, class and nation in order to understand the key terms guiding inquiry in gender and sexuality studies. K. Kellejian, K. Leissle, K. Rosenberg (5) I&S

BISGWS 302 Histories and Movements of Gender and Sexuality Studies a variety of women's, feminist, and gender and sexuality justice movements around the world. Topics may include: women in armed revolutionary movements; queer activism; embodied protests; civil rights and anti-racism movements; labor activism; and feminist movements. (5) I&S, DIV

BISGWS 303 Approaches to Feminist Inquiry Explores approaches to knowledge (epistemologies) and investigative practices (methodologies) that share the kinds of questions that feminist scholars bring to social phenomena. In this class, we chart key developments in and trajectories of feminist interventions through a range of disciplinary sites. R. AANERUD (5) I&S

Global Studies

BISGST 303 History and Globalization The phenomenon of globalization has attracted the attention of many academic disciplines which often attribute novelty to trends that have in fact been around for centuries. Provides a historical perspective on current debates about globalization. Approaches may vary with instructor. (5) I&S

BISGST 324 International Political Economy The study of interrelations between international politics and economics. Addresses the Bretton Woods institutions, differing political conceptions of international economic relations, trade, trade restrictions, trade agreements, global financial flows, migration, and exchange rates. Methods emphasize institutional analysis, historical analysis, accounting frameworks, and formal economic models. (5) I&S, QSR

BISGST 397 Topics in Global Studies Examines a topic, theme, problem, or area of the world in order to provide a deeper understanding of an aspect of Global Studies. (5, max. 15) I&S

BISGST 497 Advanced Topics in Global Studies Advanced study of a specific topic, problem, or area of the world in order to provide a deeper understanding of an aspect of Global Studies. (5, max. 15) I&S

Interdisciplinary Arts

BISIA 207 Introduction to Creative Writing: Words, Stories, Dialogues Inquires into basic elements of creative writing that occur in multiple genres and media. Studies and practices writing in a workshop atmosphere. J. HEUVING (5) VLPA

BISIA 230 Performing Arts Techniques Develops intermediate art skills and applications with emphasis on performing arts. (1-5, max. 10) VLPA

BISIA 240 Visual and Media Arts Techniques Develops intermediate art skills and applications, with an emphasis on visual and media arts. (1-5, max. 10) VLPA

BISIA 250 Photography as Art Explores photography as an artistic medium. Creates a context for understanding photography as a form of contemporary art, including expressive and interpretive strategies for taking and making pictures. (5) VLPA

BISIA 283 Interdisciplinary Art Techniques Develops intermediate skills and applications in one or more studio arts in order to enhance students' abilities as performers, arts creators, or educators. J. MILUTIS (1-5, max. 10) VLPA

BISIA 310 Creative Writing: Poetry Intensive study of the theories and practices of writing poetry. (5) VLPA

BISIA 311 Creative Writing: Prose Intensive study of the modes and means of composing creative, non-fictional prose. (5) VLPA

BISIA 319 Interdisciplinary Arts Investigates relationships between the study and making of art. Explores connections among written, visual, and performance arts and engages their intellectual, social, and aesthetic dimensions. J. HEUVING, J. MILUTIS (5) VLPA

BISIA 340 Visual and Media Arts Workshop Interdisciplinary arts workshop with an emphasis on visual and media arts. Focuses on the development and critique of creative projects in a practice-oriented setting. (1-5, max. 10) VLPA

BISIA 342 Materials and Meanings Explores the relationship between materials and meanings in art works, focusing on contemporary art practice.

Students will create and critique art projects that engage diverse and often hybrid media, including painting, drawing, sculpture, film, written language, as well as non-traditional and found materials. B. Noah (5) VLPA

BISIA 344 Video Art Explores the use of video as a contemporary art form. Focuses on the development and critique of creative projects in a practice-oriented setting. C. BODLE (5) VLPA

BISIA 350 Photography and Digital Art Explores the use of photography and 2D digital imaging as contemporary art forms in a practice-based arts workshop. Emphasizes creative and conceptual engagement. Hiebert (5) VLPA

BISIA 383 Interdisciplinary Arts Workshop Interdisciplinary arts workshop with an emphasis on building relationships among multiple arts forms. Focuses on the development of creative projects in a practice-oriented setting. J. HEUVING, J. MILUTIS (1-5, max. 15) VLPA

BISIA 401 Literary and Arts Journal Editorial Board Provides opportunity to learn about publishing a literary journal by publishing the UWB Literary Journal. Students gain skills in communication, assessing and editing literary texts, layout design, technology for creating and disseminating multi-media work, project management, and teamwork. (2-5, max. 20)

BISIA 410 Advanced Creative Writing Workshop (1-5, max. 15) VLPA

BISIA 440 Advanced Visual and Media Arts Workshop Focuses on the development of creative and conceptual projects in a practice-oriented setting. (1-5, max. 15) VLPA

BISIA 450 Image and Imagination Explores image-based arts in a contemporary context in an advanced arts workshop. Emphasizes the development of creative and conceptual projects in a practice-oriented setting. Hiebert (5) VLPA

BISIA 483 Advanced Interdisciplinary Arts Workshop Advanced interdisciplinary arts workshop with an emphasis on synthesizing multiple art forms. Focuses on the development of creative and conceptual projects in a practice-oriented setting. J. HEUVING, J. MILUTIS, L. WATTS (1-5, max. 15) VLPA

BISIA 484 Arts Learning in the Community Develops a theoretical and practical understanding of arts-practices in relation to a selected community context. Engages in a specific project at an educational, social service, or arts organization, or in an arts-project that works across communities. J. HEUVING, J. MILUTIS, L. WATTS (5-10, max. 10)

Law, Economics, and Public Policy

BISLEP 301 Law, Economics, and Public Policy Examines the relationships among the fields of law, economics, politics, and public policy, with particular attention to problems of social, economic, and political change. Uses examples from various areas of public policy, including social, environmental, and education policy. Prerequisite: ECON 200, B CUSP 200, BIS 200, or BBUS 220. (5) I&S

BISLEP 302 Policy Analysis Provides an introduction to the approaches and methods used in analysis of laws and policy utilizing case studies, statistics, and demographic evidence. Draws on contribution from microeconomics, statistics, political analysis, and social demography to examine trade-offs make in public policy design and implementation as well as impacts of implemented polices. Carlisle, Nitta (5) I&S

BISLEP 397 Topics in Law, Economics, and Public Policy Examines a topic, theme, or problem at the intersection of law, economics, and public policy. (5, max. 15) I&S

BISLEP 497 Advanced Topics in Law, Economics, and Public Policy Advanced study of a specific topic, theme, or problem at the intersection of law, economics, and public policy. (5, max. 15) I&S

Media and Communication Studies

BISMCS 234 Media and Communication Techniques Develops beginning to intermediate skills and techniques in one or more forms of communication practice and media production. Krabill, Milutis (1-5, max. 10) VLPA

BISMCS 240 Working with Video Introduction to conceptual foundation and principles of video production. Develops beginning to intermediate skills in video production. (5) VLPA

BISMCS 260 Working with Audio Introduction to the conceptual foundation and principles of audio production. Develops beginning to intermediate skills in audio production. (5) VLPA

BISMCS 333 Media and Communication Studies Emphasizes the skills of critical media analysis and creative media production. Addresses media representations and the importance of media in structuring contemporary society. Behler, Harewood, Krabill (5) VLPA/I&S

BISMCS 343 Media Production Workshop Provides hands-on experience in communicative practice and the production of media. Combines production and theory. Harewood, Milutis (1-5, max. 15) VLPA

BISMCS 402 Community Media Practice Provides an opportunity to undertake practice-based work in community media organizing and media production. Students gain skills initiating and maintaining community-based efforts in the context of media. They also gain experience using relevant media hardware and software, developing programming ideas, and recording, editing, and distributing media content. (2-5, max. 20) VLPA

BISMCS 471 Advanced Topics in Media and Communication Studies Advanced study of a topic in media and communication that includes a practice component. Behler, Krabill (5, max. 15)

BISMCS 472 Advanced Media Production Workshop Provides focused study and production in a specific area of media arts and practice. (1-5, max. 15) VLPA

BISMCS 473 Visual Communication Examines the everyday world of images, image-making, design, and visual culture. Introduces students to different visual methodologies, modes, and sites of contemporary visual production. (5) VLPA/I&S

Society, Ethics, and Human Behavior

BISSEB 304 Institutions and Social Change Explores the patterns of power that create our social world and how those patterns can be challenged or modified. Examines cultural, institutional, and interpersonal ways that people gain, challenge, and are affected by power and considers how and whether to bring about social change. (5) I&S

BISSEB 331 The Family in U.S. Society Examination of the historical development of the family, and the theoretical underpinnings of family relationships. Discusses current trends and changes in the family and family life. (5) I&S

BISSEB 333 The Individual and Society Socialization is the process by which individuals develop into social beings. Examines various theories of socialization and human development. Explores the role played by social structure and institutions in the integration of the individual into society. (5) I&S

BISSEB 359 Ethics and Society Examination of major ethical alternatives (egoism, utilitarianism, hedonism, virtue ethics, relativism, emotivism) along with competing visions of the good society (libertarian, communitarian, feminist). Analyzes several contemporary problems, such as legal moralism, affirmative action, euthanasia, capital punishment, corporate responsibility. (5) I&S

Science, Technology, and Society

BISSTS 231 Genes, Genomes and Heredity Explores basic concepts of heredity, including DNA structure and function, Mendel's rules of inheritance, and

human genetic diseases. Goals include understanding current issues in the field, including genetic screening and testing, DNA fingerprinting and forensic analysis, the genetic basis of cancer, and genetically modified organisms. Offered: jointly with B BIO 231. (5) I&S/NW

BISSTS 232 Embryos, Genes and Reproductive Technology Explores human reproduction, embryonic development, and genetic technology. Explores the increasing use of technology used in reproduction and related issues (e.g. in vitro fertilization, genetic selection of embryos, cloning, stem cells). Offered: jointly with B BIO 232. (5) I&S/NW

BISSTS 307 Science, Technology, and Society Presents concepts and theories used to investigate the creation, application, and governance of science and technology. Addresses the nature of scientific and technological knowledge, social construction of science and technology, democracy and science, and public understanding. J. CRANE (5) I&S

BISSTS 397 Topics in Science, Technology, and Society Examines a topic, theme, or problem at the intersection of science, technology, and society. (5, max. 15) I&S

BISSTS 497 Advanced Topics in Science, Technology, and Society Advanced study of a specific topic, or problem at the intersection of science, technology, and society. (5, max. 15) I&S

Policy Studies - Bothell

BPOLST 492 Topics in Policy Research Explores topics in policy research to prepare students planning to enter a graduate level policy program. Topics may include: quantitative research methods, qualitative research methods, or research writing for the social sciences. (3-5, max. 10)

BPOLST 501 Public Finance and Budgeting Analysis of government expenditures and revenues. Uses economic theory to examine key pubic policies in areas such as health, education, and labor. Emphasizes policy rationales and impacts regarding efficiency and equity. Develops accounting concepts necessary for budgeting analysis. Offered: Sp. (5)

BPOLST 502 Statistics for Policy Studies Surveys important aspects of social science research for academic and practical investigation. Focuses on gaining an understanding of research and statistical analyses and their relationship to policy concerns. Prerequisite: minimum grade of 2.7 in BPOLST 500. Offered: W. (5-)

BPOLST 503 Policy Analysis Focuses on methods and approaches used in policy analysis and program evaluation. Examines and applies interdisciplinary approached and methods for evaluating policy impacts and outcomes, including cost-benefit analysis, randomized field experiments, quasi-experimental assessment, and participatory assessment. (-5)

BPOLST 505 Leadership and Organizations Explores the human interactional dimension of organizational culture, behavior, and outcomes. Special attention is devoted to how individual and group dynamics frame the options open to leaders, managers, and employees in public, private, and non-profit organizations, and how leaders and managers shape the culture and behavior of organizations. Offered: W. B. KOCHIS, K. NITTA (5)

BPOLST 506 Capstone Research Depending of work experience, participate in an internship or field research in a private, public, or non-profit organization to investigate a policy problem. Conduct primary or secondary research, collecting data, and selecting theoretical perspectives. Represents the first stage of the Capstone project. Offered: A. (5-)

BPOLST 509 Pro-Seminar for Policy Studies Develops professional competencies and explores career development in policy fields. Builds skills in applied policy ethics, conflict resolution, policy writing, and public speaking. Provides opportunities to network with alumni, faculty, and professionals active in the

field. Credit/no-credit only. Offered: AWSpS. B. KOCHIS (1, max. 4)

BPOLST 510 Statistics Fundamentals for Policy Studies Intensive two-week, pre-fall course providing foundations in statistical methods. Covers statistical notation, population, sampling distribution and standard normal distributions, graphs and tables, inferential statistics, descriptive statistics and correlations. Prepares students for advanced linear methods. May include weekend meetings. Credit/no-credit only. (5)

BPOLST 511 Policy Process and Policy Analysis Focuses on public policy processes and introduces common methods of policy analysis. Examines rationales for public policy and how policies are articulated and negotiated; formulation of policies; selection of policy instruments; policy implementation; cost-benefit analysis and deliberative policy analysis approaches. Offered: A. (5)

BPOLST 513 Practicum in Policy Studies Begins capstone research sequence. Students explore issues of policy interest by connecting and building relationships with community stakeholders that influence and are affected by those issues. Students develop community engagement skills by completing a community-based learning project and reflect on the ethical, practical, and theoretical implications of community engagement. Offered: W. C. COLLINS, K. NITTA (5)

BPOLST 514 Management and Program Evaluation Provides an overview of the major literatures in organization theory and management. Focuses on developing managerial skills: supervising subordinates, building a team, mapping stakeholders, and problem-spotting, with special attention to program evaluation methods and approaches, including logic models, participatory approaches, and quantitative methods. Prerequisite: minimum grade of 2.7 in BPOLST 500, BPOLST 502, and BPOLST 503. (5)

BPOLST 515 Capstone Integrates students' learning experience in the program. They demonstrate their ability to apply the tools of policy research, analysis, and engagement to a contemporary policy issue. It follows the Practicum and builds on promising questions and collaborations. Students work in close partnership with their faculty Capstone Advisor. (6)

BPOLST 520 Policy Internship Student arranged internship with a local organization or agency that incorporates a "field-based" component into their learning. Includes a policy project that benefits the organization and has academic merit. Prerequisite: BPOLST 500; BPOLST 502. Credit/no-credit only. Offered: AWSpS. (2-5, max. 10)

BPOLST 571 Policy Ethics Examines the complex relationships between policy and ethics. These relationships are grounded in moral and political theories about the behavior of state and non-state actors. Offered: AWSp. Kochis (5)

BPOLST 576 Education Policy and Politics Covers the historical development of U.S. K-12 education policy, with particular focus on contemporary education policy issues and debates, such as standards, tests, accountability, and school choice. Addresses the process and politics through which education policy is made at the federal, state, and district levels. D. JACOBY (5)

BPOLST 581 Issues in Human Rights Policy Explores the theories and practices of implementing the international human rights regime as government policy. Students engage in issues of normativity in policy formation and the pathways by which certain norms become domestic and global standards. (5, max. 10)

BPOLST 582 Issues in Technology Policy Explores how science and technology contribute to economic growth and human development, and how political processes shape and manage that impact. Examines historical and contemporary issues. (5, max. 10)

BPOLST 583 Issues in Environmental Policy Analyzes current policy issues in the complex and every changing arena of environmental policy. (5, max. 10)

BPOLST 584 Issues in Labor and Human Resources Examines issues in the changing arena of labor and human resource policy. Jacoby (5, max. 10)

BPOLST 585 Issues in Health Policy Examines relevant current issues in the changing arena of health policy including managed care, public health and safety, and the ethical dimensions of medical research and practice. (5, max. 10)

BPOLST 586 Issues in Education Policy Examines issues in education policy in local and global contexts. (5, max. 10)

BPOLST 591 Research Colloquium Provides an opportunity for graduate students and faculty members to exchange research ideas, present findings, discuss analytical methods and tools, and evaluate the implications of the presented research. Credit/no-credit only. Offered: jointly with BCULST 591; AWSp. (1-2, max. 6)

BPOLST 592 Topics in Policy Research Develops advanced technical skills in policy research methods. Topics may include various qualitative and quantitative methods of research. (3-5, max. 10)

BPOLST 593 Topics in Policy Studies Examines the changing arena of policy. Topics are relevant to current issues and may include the following: policy and gender; transportation policy in Puget Sound; policies of aging; and environmental policy. (3-5, max. 10)

BPOLST 594 Research Design Provides grounding in research designs, such as experimental, longitudinal, cross-sectional, case-study, and action research design. Helps professionals design and evaluate research proposals and be astute consumers of published research. Develops research proposals that can be submitted for institutional review at UW. Offered: Sp. (5)

BPOLST 595 Policy Studies Skills Workshop Provides the opportunity to develop applied skills commonly required of managers and analysts in the public and non-profit sectors. Workshops emphasize hands-on learning and actual practice. (1-3, max. 9)

BPOLST 598 Directed Research Individual advanced research on policy topics conducted under the direction of one or more instructors. (1-5, max. 15)

BPOLST 591 Research Colloquium Provides an opportunity for graduate students and faculty members to exchange research ideas, present findings, discuss analytical methods and tools, and evaluate the implications of the presented research. Credit/no-credit only. Offered: jointly with BCULST 591; AWSp. (1(2), max. 6)

School of Nursing and Health Studies

Health Electives

B HLTH 179 Interpersonal Communication Provides an overview of the theoretical and practical concerns in the study and practice of communication within interpersonal encounters. Emphasizes how to analyze communicative behavior and practice applied strategies for improving communication skills in the context of interpersonal settings of work, family, friendship, and romance. (5) I&S

B HLTH 196 Preparing to Work in Partnerships with Communities Provides an introduction to participatory and asset-oriented approaches to forming community partnerships. Students learn concepts and skills necessary for successfully engaging in community building, including: the importance of self-reflection; personal skill assessment; cultural humility; issues regarding power and privilege; reciprocity; and core principles inherent in community-based participatory approaches. (4) I&S

B HLTH 197 Selected Preparatory Topics in Health Provides students with basic preparatory knowledge and skills in a health-related topic. Covers fundamental concepts and principles, as well as practical applications, to prepare students with a better understanding of promoting human health and well-being. Offered: AWSpS. (1-5, max. 10)

B HLTH 198 Introduction to Physical Activity, Nutrition, and Health Provides an introduction to physical activity fitness, nutrition, and health. Emphasizes theoretical foundations, practical applications, and skill development to promote and sustain personal well-being and health. (5) I&S

B HLTH 199 Understanding Global Health Through Film Provides an introduction to the growing field of global health, using films to highlight the diverse experiences of illness and health care across the world. (5) I&S

B HLTH 200 Lifespan Development Focuses on quantitative and qualitative growth and developmental changes across the lifespan from conception to end of life. Emphasizes influence of changes on health and how developmental theory and research guide health promotional efforts. Uses contextual perspective to analyze how interactions between biology and environment contribute to developmental outcomes. (5) I&S

B HLTH 201 INTRODUCTION TO GLOBAL HEALTH Introduction to global health for students of all backgrounds and disciplines. Focuses on how health is measured around the world, and how socioecological forces shape health experiences and outcomes. Surveys topics of global health research and practice, and invites students to independently analyze global health issues in specific geographic contexts. N. Kenworthy (5) I&S

B HLTH 215 Statistics for Health Sciences Provides an overview of basic concepts of statistics used in health sciences with opportunities to learn through experience with health-related data. Offered: jointly with B MATH 215. (5) QSR

B HLTH 216 Culture/Ethnicity and Religions Influence on Food Choices Multiple factors contribute to the nutritional status of individuals. Among these factors are culture and religion. Understanding the meanings people place on food and the role food holds in some people's value and belief systems is necessary to provide holistic care. (5) I&S

B HLTH 217 Nutrition and the Older Adult Explores factors necessary to maintain and enhance the nutritional needs of independently living older adults. (5) NW

B HLTH 218 Nutritional Science Introduces key concepts of nutritional science: biochemistry, anatomy and physiology, diet analysis, and scientific principles of investigation. Students explore components of a healthy diet in the context of health and wellness, self-discovery, research analysis, and current issues. Offered: AW. G. LASKER (5) NW

B HLTH 219 Lifespan Nutrition Examines the fundamentals of nutrition for different life stages including pregnancy, infancy, childhood adolescence, adulthood, and old age. Covers topics applicable to needs at each stage, Students conduct a personal dietary assessment and analyze the application of nutrition at the self, family, and community levels. G. LASKER (5) NW

B HLTH 220 Community Nutrition Investigates the role of nutrition in promoting, maintain, and improving health in the community. Students study the role of various indicators of a healthy community; social determinants of health, legislation, food access, and community design. Students outreach with local nutrition and wellness partners. J. EARLY, G. LASKER (5) I&S

B HLTH 221 Dimensions of Personal Health and Wellness Introduces students to a holistic view of health and covers the eight dimensions of wellness. Emphasizes personal health and how socio-ecological and cultural factors influence individual behavior and overall health status. Explore strategies that improve lifetime wellness. Offered: ASpS. (5) I&S

B HLTH 222 Latina/o Health and Culture: Issues, Beliefs, Practices, and Local Perspectives Examines health issues in the Latina/o community through the lens of health research, arts and other cultural expressions, community organization stakeholders, and fieldwork. Focuses on the diverse experiences with health care and healing systems of this rapidly growing US community. (5) I&S

B HLTH 223 Feminist Approaches to Women's Health Examination, analysis, and critique of aspects of women's health from a feminist/anti-oppression perspective. Topics include definitions of women's health, concepts of bodies/health, reproductive health/reproductive justice, the United States healthcare system, and disparities in women's health. Uses scholarly and popular articles/books, digital media, film, and graphic novels as source materials. M. EAGEN (5) I&S

B HLTH 224 Disease, Human History, Society, and Civilization Examines the connections between infectious disease and human history focusing on how plagues and epidemics influence social upheavals and changes in civilization. Explores historical implication, cause, and symptoms, transmission, treatment, and future threat diseases such as smallpox, plague, cholera, influenza, tuberculosis, syphilis, malaria, yellow fever, and HIV. S. IVERSON CABRAL (5) NW

B HLTH 225 Introduction to Cancer Biology Examines the basic biology and history of cancer with a focus on how genetics, age, infectious agents, and environmental factors contribute to the developmental of disease. The risk factors, cause, diagnosis, treatment, and prevention of cancers including breast, skin, liver, thyroid, prostate, lung, and cervical are explored. S. IVERSON CABRAL (5) NW

B HLTH 226 Race, Socioeconomic Status, and Health Examines race and socioeconomic status, and their effect on health and health care. Attention is given to the health status of the poor and of major racial/ethnic minority groups in the United States, with respect to ways in which their health and healthcare services are embedded in social contexts. (5) I&S

B HLTH 227 Migration and Population Health: A Global Representation in Films and Arts Provides a link between migration and public health using the social determinants of health framework. Emphasizes how migrants/immigrants are portrayed in films, television, literature, music, and other artistic images. Explores theories of migration, migration-health relationship, and health issues of migrant populations. (5) I&S/VLPA

B HLTH 228 Infectious Disease Detectives: The Pathogens Inside Explores the diagnostic process, human drama, and public health implications of infectious disease. Specific diseases such as botulism, flesh eating bacteria, tape worms, etc., will be described using case studies to highlight real vs. perceived risk and the role of government in public health. Offered: AWSpS. S. Iverson Cabral (5) NW

B HLTH 297 Selected Introductory Topics in Health Provides students with introductory knowledge and skills in a health-related topic. Covers fundamental concepts and principles, as well as practical applications, to prepare students with a better understanding of promoting human health and well-being. Offered: AWSpS. (1-5, max. 10)

B HLTH 301 Global Health Practice: Systems, Places, and People Introduction to global health practice that offers a close-up, hands-on, critically-informed, and experiential learning experience either in the form of community based learning projects (CBLR), or connected online international learning (COIL) opportunities, or both. Examines what global health systems, geographies, and professional roles look like around the world. N. Kenworthy (5) I&S

B HLTH 320 Human Health and the Environment Examines the relationship between environmental factors and the health and well-being of individuals, families, communities, and populations. Contemporary understanding of how the natural and built environments influence risk for disease and

illness illustrated through case examples. Explores multi-disciplinary approaches to address environmental problems and improve living and work spaces. (5)

B HLTH 397 Current Health Topics Survey of current issues in human health with analysis of selected topics. The personal, social, political, and economic aspects of health are explored through professional health writing and interdisciplinary literature. (3-5, max. 15)

B HLTH 400 Study Abroad: Health Studies Upper-division health related courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. (1-5, max. 15) I&S/NW

B HLTH 401 Research Journal Editorial Board Serves as membership on the campus's research journal Editorial Board. Focuses on managing the content and production of the research journal, which is produced annually. Registration is by instructor permission only. Credit/no-credit only. Credit/no-credit only. (2-5, max. 18)

B HLTH 402 Microbiology, Human Disease, and global Health Explores global health concepts related to infectious disease with an emphasis on the connection between the host, pathogen, and environment. Focuses on how microbiology and pathogenicity, in addition to human behavior, influences disease outcomes and impacts society. S. Iverson Cabral (5) NW

B HLTH 405 Race, Power, and Food Examines the politics of nutrition in the age of globalization. Revisits, re-envisions, and re-articulates dominant understandings of history and culture as they relate to food. Explores food culture as a form of artistic expression, and uses documentary films and interactive theatre to build communication strategies rooted in students' identities. Presents powerful tools for building alliances across racial, gender, class, and cultural lines. (5) DIV

B HLTH 410 Genetics and Public Health Explores the importance of human genome research findings for patient care and emphasizes developing skills for evaluating and communicating about genetic risks. Wade (5) I&S/NW

B HLTH 411 Environments and Health Facilitates understanding of complex relationships between human health and living and working environments. Students identify ways that professionals, private citizens, and members of community groups can take actions to preserve the environment and protect human health. (5) I&S/NW

B HLTH 420 Women's Global Health and Human Rights (5) I&S

B HLTH 421 Food and Culture Through writing, video, storytelling, and creative exploration, examines the forces that shape our choices about food, and how food choices drive our economy, our health, our self-image, and our social connections. (5) VLPA/I&S

B HLTH 422 Walking in Beauty: Native Art and Healing Explores the impact of social, economic, historic, and environmental disparities on American Indian/Alaska Native health, along with the healing effects of Native art, culture, pride, and community. (5) VLPA/I&S

B HLTH 423 Global Health: Critical Perspectives Critical exploration into the emerging field of global health, focusing on: how historical and social forces shape health in the world; and global health practice and strategy across different contexts. (5) I&S

B HLTH 424 Root Issues in American Indian Health Provides an overview of biobehavior and psychosocial health issues in American Indian communities. Uses media created by Native people and expresses perspectives best understood in Native voices and images to explore how social determinants of health intersect and shape health conditions, health beliefs, healing practices, and delivery of care. (5) I&S

B HLTH 425 Health in a Developing Nation: Study Abroad Provides an overview of the health and health

care challenges in a developing and low-income country. Addresses socio-cultural, environmental, economic, political, and ecological factors that influence health, illness, disability, and death as well as responses to health issues both within and outside the health sector. Includes study abroad. (5) I&S

B HLTH 426 Exploring the Humanities in Healthcare Explores how one or more of the arts/humanities are used in healthcare settings to help patients, their families and friends, and healthcare professionals: promote wellness, healing and recovery; and process illness, trauma, or loss experiences. (5) VLPA

B HLTH 427 Women, Culture, and Healing Interdisciplinary course explores the inter-connectedness of identity, culture, healing. Addresses how women make meaning in their lives; how they are both shaped by and influence history, culture, and the world. Integrates humanities, social and health sciences to study cultural influences on women's health and healing. (5) VLPA/I&S

B HLTH 428 Adolescent Health Explores growth and development, challenges of adolescence, and how society, through its communities, health agencies and schools and media, identifies and responds to adolescent health care needs. Uses literature and media produced for adolescent and professional, reflective writing and interviews to examine issues related to promoting adolescent health. J. RESNICK (5) I&S

B HLTH 429 Global and Local Health Inequalities and Interventions Examines the conditions (political, economic, cultural, historical) that create and sustain disparities in health globally and locally. Critically examines health issues from multiple perspectives, exploring theories and movements of people creating social justice in health within frameworks that are both globally and locally situated. Abrums (5) I&S

B HLTH 430 Health Policies and Politics in a Global Context Examines current and emerging global health challenges, their transnational determinants, and selected policies that address those challenges at varying national and global political contexts. (5) I&S

B HLTH 431 Representations of Health Policy and Ethics in Film Examines representations of ethical and policy conflicts about health and health care in contemporary films. Explores competing images of bodies, workers, policies, and institutions used to frame these debates. Films supplemented by readings in film analysis, literature, narrative ethics, and health policy. (5) VLPA

B HLTH 435 Foundations and Principles of Health Education and Communication Introduction to the health education profession, associated competencies, theories and principles of health communication. Covers strategies and design principles for planning culturally tailored health education and communication for a variety of audiences, uses digital technology and social media for health promotion. Includes a service learning assignment. Prerequisite: BHS 201 Offered: ASp. (5) I&S

B HLTH 436 Introduction to Management and Leadership for Health Professionals Introduction to management and leadership principles for health promotion specialists and other health professionals. Content develops skills and competencies for managing and leading health promotion programs and staff. Activities emphasize introspection and reflection, cultural humility, and address issues that influence the implementation of health promotion programs. Prerequisite: BHS 201 Offered: AWSpS. (5)

B HLTH 437 Program Planning & Strategies for Health Promotion Introduction to program planning for health education specialists, including: needs and capacity assessment, strategy selection, and theoretical frameworks. Covers program implementation, management, and evaluation concepts. Assignments include developing a sample program plan and experiential, community-based activities. Prerequisite: BHS 201 Offered: AWSpS. (5)

B HLTH 438 Program Evaluation for Health Education & Promotion Introduces competencies, theories and principles of program evaluation to health education and promotion specialists. Emphasizes cultural humility and respectful community engagement as frameworks for successful program evaluation. Explores and employs various evaluation methodologies, quantitative and qualitative. Includes a service learning assignment. Prerequisite: BHS 201; BHS 300; B HLTH 437 Offered: AWSpS. (5)

B HLTH 439 Health Policy and Advocacy Examines how health policy and advocacy influence health outcomes of individuals and populations. Addresses policy process and the advocacy role of health education specialists in influencing local, state, and federal policy. Considers the impact of global trends on public health practice, policy, and systems. Prerequisite: BHS 201 Offered: AWSpS. (5)

B HLTH 440 Health of Military Veterans Intended for students less familiar with military and veteran issues and environments. Addresses the more common mental and physical health issues that are faced by today's veterans (primarily but not exclusively United States military veterans), their families, and communities. A. KOVALESKY (5) I&S

B HLTH 441 Community Engagement in Health Interventions and Research: From Principles to Practice Introduces principles and approaches of engaging and collaborating with communities when planning, implementing, and evaluating population-level interventions and research. Includes fieldwork assignment with a community agency or organization so lessons of community engagement can be experienced. (5)

B HLTH 442 Family Caregiving Across the Life Span Focuses on family caregiving across the lifespan. Examines issues, problems, and challenges family caregivers face while taking on this role across communities and illnesses. Supports health and social service providers in defining their roles within the context of family caregiving. (5) I&S

B HLTH 443 Assessment of Older Adults Focuses on understanding the experience of aging and developing competence in assessing older adults and their needs. Studies and evaluates selected evidence-based functional, clinical, and psycho-social assessment instruments and approaches relevant to desired professional practice focus. S. SIKMA (5)

B HLTH 444 Disaster Preparation: Promoting Community Resiliency Analyzes community and individual vulnerabilities and assets that impact disaster outcomes. Examines hazard awareness, risk reduction, resiliency, and mitigation in disaster prevention planning and response. Addresses select assessment, planning, implementation, and evaluation efforts to enhance community and individual capacities. Also applies public health principles in disaster preparation to promote community health. (5)

B HLTH 460 Women, Rhetoric, and Healing Examines the history and theory of rhetoric, focusing on how women are represented in terms of persuasion, education, and relationship that might have not been privileged or acceptable in past centuries. Students gain confidence in their abilities to represent themselves as educated, compassionate humans. (5) I&S/VLPA

B HLTH 491 Special Topics in Health - Health & Life Sciences Investigates a selected topic in Health and Life Sciences not covered in the current core curriculum. (1-10, max. 10) I&S

B HLTH 492 Special Topics in Health - Health & Society Investigates a selected topic in Health and Society not covered in the current core curriculum. (1-10, max. 10)

B HLTH 493 Special Topics in Health - Health Policy, Leadership, & Ethics Investigates a selected topic in Health Policy, Leadership, & Ethics not covered in the current core curriculum. (1-10, max. 10) I&S

B HLTH 494 Special Topics in Health - Community Health Intervention & Practice Investigates a selected topic in Community Health Intervention and Practice

not covered in the current core curriculum. (1-10, max. 10) I&S

B HLTH 497 Selected Topics in Health (3-5, max. 15)

B HLTH 498 Special Project in Health Provides the opportunity to pursue a specific health-related project under faculty supervision. Project activities facilitate the attainment of knowledge, skills, and practical experience that contribute to the advancement of professional career goals in a health field. Offered: AWSpS. (1-10, max. 10)

B HLTH 499 Undergraduate Research in Health Studies Provides the opportunity to engage in research-related activities under the supervision of a faculty mentor. Students gain understanding of theoretical and methodological approaches, practical research skills, and importance of scientific findings with respect to a selected area of inquiry in a health science field. Offered: AWSpS. (1-10, max. 10)

B HLTH 510 Genetics and Public Health Explores the importance of human genome research findings for patient care and emphasizes developing skills for evaluating and communicating about genetic risks. Wade (5)

B HLTH 597 Special Topics in Health (3-5, max. 10)

Health Studies

BHS 201 Introduction to Public Health Provides an introduction to the principle of public health with exploration of the frameworks, tools, and evidence base that guides disease prevention and health promotion efforts. Consideration given to ethical and public policy issues important to ensuring the fair distribution of resources. Offered: AW. C. Wade (5) NW/I&S

BHS 300 Principles of Health Research Develops competence in accessing, understanding, and evaluating scientific knowledge about population health. To improve students' ability to effectively advocate for public health improvements, emphasis placed on composition approaches that effectively synthesize and translate evidence. Offered: AW. de Castro, Cooke, Kenworthy, Stone, Wade. (5) NW

BHS 302 Social Dimensions of Health Addresses several main concepts in public health with an exploration of the links between: community, health, and culture; health equity and social justice; and the emerging field of global health. Prerequisite: minimum grade of 2.0 in BHS 201. (5) I&S, DIV

BHS 305 Introduction to Healthcare Policy and Systems Provides an introduction to policies, organizations, and systems that have shaped the U.S. healthcare system. Topics such as financing healthcare, forms of insurance, and care delivery models will be examined through a comparative lens that also explores different healthcare systems around the world. Prerequisite: BHS 201 (5) I&S

BHS 310 Pathways to Health Studies Provides a forum for students to plan their educational pathway within the Health Studies major. Provides an overview of career options and professional development opportunities, supplemented with guest lectures by professionals working in the field. Prerequisite: minimum 2.0 grade in BHS 201. Credit/no-credit only. Offered: W. (2)

BHS 403 Introduction to Epidemiology Introduces principles, methods, and issues in public health practice-based epidemiology. Covers research designs and methods to describe disease occurrence and risk factor associations, and the role of epidemiologic data in health policy. Prerequisite: minimum grade of 2.0 in BHS 201 and BHS 300; and minimum grade of 1.7 in either B HLTH 215/B MATH 215, BIS 315, B BUS 215, or STMATH 341. Offered: S. (5)

BHS 495 Health Studies Senior Portfolio Focuses on developing a learning and professional portfolio, advancing critical thinking skills, synthesis of knowledge relevant to the health field, and honing writing and presentation capacities for appropriate audiences. Involves collaboration with other graduating students. Prerequisite: BHS 201; BHS 300;

BHS 302; BHS 310; BHS 403; and must have senior student status. Co-requisite BHS 496. Credit/no-credit only. (3)

BHS 496 Fieldwork in Health Students participate in fieldwork experiences to explore career options and develop skills in population health practice. Students use critical reflection to synthesize knowledge and experiences from fieldwork and program courses to support their professional development. Prerequisite: BHS 201; BHS 300; BHS 302; BHS 305; and BHS 403 (which may be taken concurrently). Credit/no-credit only. (5)

Nursing

B NURS 101 Introduction to the Nursing Profession Examines the nursing profession in contemporary American society, including how the term "nurse" is defined and used, the unique features nurses provide in today's healthcare arena, and organizations which advocate for the development of the profession and its members. Credit/no-credit only. Offered: A. (1)

B NURS 102 Historical Images of Nursing Examines the history and various images of nurses from the mid-19th century through the mid-20th century, including Florence Nightingale, early nursing education and nursing practice, and nursing contributions during military conflicts, to better understand issues facing contemporary nurses. Credit/no-credit only. Offered: W. (1) I&S

B NURS 103 Development of Contemporary Nursing Practice Examines the development of nursing in the last 50 years, and how the profession has both influenced and been influenced by socio-political changes and the media. Credit/no-credit only. (1) I&S

B NURS 250 Basics of Academic Writing in the Health Sciences Emphasizes practical strategies to enhance student writing skills. An online format allows flexibility to address student needs. Skills covered range from learning basic grammar rules and discerning course assignment expectations to developing robust argument strategies. Credit/no-credit only. (1-3)

B NURS 297 Building Skills in Health Emphasizes practical strategies to enhance student academic or life skills related to health and health topics. Covers fundamental concepts and skills and provides opportunities for direct application and experiential learning. Credit/no-credit only. (1-3, max. 12)

B NURS 350 Critical Thinking in Nursing Focuses on critical thinking and effective writing in nursing. Students explore nursing and health care issues, evaluate varied perspectives, and develop a reasoned analysis of current topics. (4)

B NURS 360 Critical Reading and Information Literacy in Nursing Focuses on critical reading, analysis, and source appraisal of scholarly knowledge. Builds skills in conducting systematic information searches of materials and evidence relevant to nursing practice. Basic introduction to reading of varied sources for understanding, academic writing, presentation skills, and reflective writing for academic and professional purposes. (5)

B NURS 403 Evidence Based Practice and Nursing Inquiry Develops beginning competence in accessing and evaluating scientific knowledge as a base for promoting evidence based practice in nursing care. Examines components of the process of nursing inquiry as a tool to advance nursing knowledge and a tool to promote evidence based practice. (5) NW, QSR

B NURS 407 Cultural and Social Issues in Healthcare Analyzes the impact of cultural, social, and global factors on the health of diverse populations. Critically examines how discrimination, oppression, and privilege relate to health, health disparities, illness, and healing. Students apply self-awareness, knowledge, and skills in planning for and providing non-discriminatory and culturally competent healthcare. (5) I&S, DIV

B NURS 409 Partnerships in Community Health Analyzes, applies, and evaluates nursing and other healthcare activities of local, national, and global communities, including health promotion, disease

prevention, public health, and social justice efforts. Explores influencing socio-cultural, epidemiological, economic, and political issues. Partners with community agencies to apply community health nursing principles to promote and maintain population self care. (5) I&S

B NURS 410 Legal and Ethical Issues in Clinical Practice Introduction to the major ethical theories and principles through the use of models for the analysis of representative cases. Analyzes the recurring ethical problems in clinical practice, such as withholding and withdrawing life support, promoting client autonomy, and interprofessional conflicts. (5)

B NURS 420 Health Policy and the Organization of Healthcare Overview of health policy and the organization of healthcare systems including structure, financing, and regulation. Introduces roles and approaches for healthcare professionals to participate in organizational, community, governmental health policy activities. Strategies emphasized include collaboration, partnership, and teamwork to affect policy change and improve service access, delivery, and outcomes. (5) I&S

B NURS 421 Social Justice in Health Examines how multilevel societal factors influence differences in health and the provision of health services. Emphasizes impact of power and inequality on health of individuals, families, communities, and populations. Considers principles and actions of social justice and public health ethics to encourage self-exploration of roles to advocate for social change. Prerequisite: B NURS 360. (5) I&S, DIV

B NURS 422 Team Leadership and Care Coordination Focuses on the professional nurse's role as leader across the continuum of care. Builds skills for team leadership, delegation, and supervision; Applies interprofessional teamwork and communication skills to coordination of care transitions. Emphasizes identification, reflection and giving voice to self as leader. Prerequisite: B NURS 360; and B NURS 460. (5)

B NURS 423 Ethical and Quality Nursing Care Explores strategies to promote ethical and quality patient-centered care as an individual provider, team member, and in collaboration with other disciplines. Provides a foundation of ethical frameworks and quality improvement approaches to support accountability for best practice. Prerequisite: B NURS 360; and B NURS 460. (5) I&S

B NURS 424 Population-Based Health in Community Practice Provides introduction to community health practice emphasizing nurses' roles in population-based care through partnership with community agencies. Discusses socio-cultural, epidemiological, economic, and political influences on community health. Explores the role of professional communication and collaboration in facilitating health promotion, disease prevention, public health, and social justice efforts. Prerequisite: BNURS 360; BNURS 460; BNURS 420; and BNURS 421. (5) I&S

B NURS 430 Relational Leadership in Nursing Introduces knowledge and practices that support the implementation of relational leadership in health care contexts. Content emphasizes strategies that: 1) enhance personal vision and voice; 2) create commitment; 3) include diverse perspectives; 4) solve problems; 5) resolve conflicts; and 6) accomplish goals. (5)

B NURS 460 Translating Scholarly Knowledge to Nursing Practice Focuses on strategies for translating scholarly knowledge to practice. Continue to advance skills in evaluating and synthesis of scholarly literature. Attention to effective communication of evidence through written and oral formats. Prerequisite: minimum grade of 2.0 in B NURS 360. (5)

B NURS 495 Senior Portfolio Creation of a portfolio demonstrating the progress made toward individual and program goals. Portfolio contains examples of papers, videotapes, evaluations from faculty, peers and self, and a reflective summary on the learning that has occurred. Credit/no-credit only. (1) I&S

B NURS 497 Selected Topics in Nursing Investigates a selected topic in nursing and health care not already covered in the current curriculum. (1-12, max. 12)

B NURS 498 Special Project in Nursing Further development, critical examination, and synthesis of nursing care in a specialized setting. Increasing depth of clinical practice, including care to groups and communities as clients, applying leadership skills, assessing problems affecting quality health care delivery, and applying research findings. (1-12, max. 12)

B NURS 499 Undergraduate Research Provides an opportunity to investigate a selected problem and to do an analysis and interpretation of the findings resulting from the investigation under supervision of a faculty member. (1-5, max. 12)

B NURS 501 Contemporary Issues in Advanced Nursing Practice Explores and analyzes current issues, trends, and emerging theories in advanced nursing and healthcare as they relate to variety of practice settings and health concerns. Offered: A. (3)

B NURS 503 Advanced Fieldwork in Community Health Nursing Projects involve scholarly inquiry with in-depth focused analysis, culminating in a written product/report for dissemination. Provides substantive fieldwork experience in student's setting of interest. Assists students in the delineation of advanced nursing roles and application of theoretical concepts into the real-world context. Prerequisite: B NURS 501, B NURS 527, B NURS 504, B NURS 526, B NURS 520, B NURS 580; B NURS 502 and B NURS 521, which may be taken concurrently. (1(6), max. 12)

B NURS 504 Disparity and Social Justice in Healthcare Analyzes how social, cultural, economic, and political factors related to the nature, distribution, and meaning of health and illness. Examines how social determinants contribute to health inequity and create health disparities. Emphasizes advocacy approaches to improve individual and population health outcomes and quality of healthcare system. Offered: A. (3)

B NURS 505 Pathway Planning, Practicum, and Portfolio Critically examines advanced nursing roles in complex and inter-professional healthcare environments, including clinical practice, leadership, and education. Coaches students to analyze their current fit with the competencies required for advanced roles. Creates plans for elective coursework and practicum experiences to meet competencies of their selected advanced nursing role. Prerequisite: B NURS 501. Credit/no-credit only. (1-6, max. 12)

B NURS 506 Advanced Pathophysiology, Pharmacology and Health Assessment Focuses on expanding student knowledge of pathophysiology, pharmacology, and health assessment beyond the baccalaureate level. Course does not prepare student for independent practice as an Advanced Practice Registered Nurse (APRN), but provides advanced understanding of pathophysiology, pharmacological treatment possibilities, advanced health assessment, and reasoning. (3)

B NURS 508 Ethics, Aesthetics Examines, critiques, and applies theories, models, and methods associated with the fields of ethics and aesthetics in advanced nursing roles. (3)

B NURS 510 Technology and Pedagogy Develops a teaching philosophy consonant with technology-enhanced learning environments. Evaluates and selects technologies for teaching and learning activities. Develops and applies learning objectives derived from Bloom's taxonomy. Converts an online or hybrid learning activity from passive to active. Creates an online or hybrid learning activity and an evaluation plan. Resnick (3)

B NURS 511 Curriculum Development in Nursing Education Includes the theoretical rationale for curriculum development and study of curricular problems in nursing in relation to the elements of the curriculum as described in a curricular design. Prerequisite: permission of program. (3)

B NURS 512 Evaluation of Clinical Performance in Nursing For graduate students preparing for faculty or staff development positions in nursing. Theory and principles of evaluation. Instruments to appraise clinical nursing performance developed as part of course requirements. Prerequisite: graduate standing or permission of instructor. (3)

B NURS 513 Theories and Methods of Teaching and Learning Addresses theories and methods of teaching and learning, tools and resources, role development, and current issues faced by those who teach in higher education and staff development. Includes practice and evaluation of strategies. (3)

B NURS 514 Mentoring in Nursing Education, Leadership, and Clinical Practice Analyzes and applies selected models of mentorship in nursing education, leadership, and clinical practice contexts. Examines applications of mentoring at both inter-individual and organizational levels. Synthesizes knowledge and about best practices in mentoring. Identifies and develops competence in multiple mentoring roles. (3)

B NURS 520 Translational Research I Analyzes conceptual, theoretical, and empirical knowledge as a basis for evidence-based practice. Examines methodological approaches to research applied to nursing practice. Evaluates the role of advanced practice nurses in research. First of a two-quarter sequence in translating research scholarship into nursing practice. Prerequisite: a course in statistics. Offered: A. (3)

B NURS 522 Translational Research II Examines and applies frameworks, models, and processes in the context of organizational and system structures. Emphasizes attending to the organizational context and outcomes oriented program planning to assure that best practices are effectively integrated. Prerequisite: minimum grade of 2.7 in B NURS 520. (3)

B NURS 525 Healthcare Systems Leadership for Advanced Roles Personal and professional development for leadership in advanced nursing roles in healthcare systems and nursing education. Emphasis is on application of leadership and systems theory, critical thinking, and interprofessional collaboration to leadership roles that will improve population health, quality, and safety of care in organizations and systems. (3)

B NURS 526 Program Planning and Program Evaluation in Health Service Delivery Analyzes selected theories and methods of program planning and program evaluation in the design, organization, and development of health services for defined populations in the community. Reviews selected theoretical and research models for their use in the conceptualization and development of health programs and services for defined populations. (3)

B NURS 530 Advanced Practice Management and Adminstration in Healthcare Organizations Examines management organizational theory and administration of healthcare organizations. Focuses on advanced management skills such as: strategic planning, budgeting, Lean/Six Sigma, mentoring, teambuilding, and motivational interviewing. Provides an experiential component where students work with management professionals in the community to observe day-to-day operations. Offered: Sp. C. COOKE (3)

B NURS 532 Introduction to Process Management and Decision Making in Healthcare Systems Introduction to key operations management principles. Includes both strategic and design decisions. A blend of theory, cases, analytical techniques, business examples, and class discussions. (3)

B NURS 534 Introduction to Project Management in Healthcare Introduction to the concepts, methods, and tools of project management. Topics include project selection, risk, definition, stakeholder analysis, communication plans, scheduling, software, resource allocation, monitoring, controlling, and post-project assessment as it relates to healthcare. (2)

B NURS 536 Managing Fiscal Performance in Healthcare Identifies the basic structure of fiscal reporting and how that process relates to resource consumption in healthcare operations. Examines the basics of fiscal reporting, cost structure and decision making in the nurse manager role. Emphasizes understanding costs and incentives in relationship to payment systems in the healthcare industry. (2)

B NURS 538 Managing and Leading High Performing Teams Focuses on examining research-based frameworks to improve individual and team outcomes. Students will analyze and manage challenges in managing or leading people. Topics include managing and resolving conflict, motivating people, forming and leading teams, managing individual and group decision making, managing performance through effective feedback. Offered: AWSpS. (2)

B NURS 540 Health Informatics Explores how technology and health care intersect. Examines health care information systems, information standards/compliance, bench-marking/evaluation techniques, usability analysis, methods for data collection/transmission/analysis, and best practices for collaboration between health care providers and technologists in designing/selecting and delivering high quality, effective systems. (3)

B NURS 550 Seminar on Professional Issues in Nursing Education Seminar on role and related professional issues in nursing education. Prerequisite: either NSG 545, B NURS 513, or T NURS 513; either NSG 546, B NURS 511, or T NURS 511. Offered: jointly with NSG 550/T NURS 550. (3)

B NURS 578 Health Care and Community Analysis of healthcare in the community from nursing and behavioral science perspectives. Socio-culture influences on health beliefs and practices, natural-care units, and community life patterns analyzed. Community as both context and target of change explored in relation to nursing approaches in health promotion and maintenance. (3)

B NURS 580 Populations at Risk in the Community Focuses on health needs and risks of selected populations in the community and theoretical and analytical perspectives on assessment and intervention strategies in community health nursing practice with groups and populations whose health is at risk. (3)

B NURS 585 Health Policy and Civic Engagement Examines the organization and structure of the United States healthcare system. Considers historical and current policies and political contexts, with special attention to the policy development process from advocate to legislation. Examines how health policy goals interface with institutional structures and other social policy domains. (3)

B NURS 597 Selected Topics in Nursing Course content and credits vary depending upon topic. (1-5, max. 15)

B NURS 598 Special Projects Scholarly inquiry with in-depth, focused analysis, culminating in a written product/report for dissemination. Credit/no-credit only. (1-6, max. 12)

B NURS 600 Independent Graduate Project/Research Provides graduate nursing students an opportunity to investigate and report on selected nursing problems under the supervision of a graduate faculty member. Credit/no-credit only. ([1-5]-)

School of Science, Technology, Engineering, and Mathematics

Biology

B BIO 130 Introduction to Marine Life Identification of invertebrates, fish, mammals, and birds of the Salish Sea with a focus on their anatomy, adaptations, and roles in the ecosystem. Exploration of unique environmental conditions that allow life to thrive in the Salish Sea, including anthropogenic impacts on local species. (5) NW

B BIO 180 Introductory Biology I For students intending to take advanced courses in the biological sciences or enroll in pre-professional programs. Mendelian genetics, evolution, biodiversity of life forms, ecology, conservation biology. First course in a three-quarter series (B BIO 180, B BIO 200, B BIO 220). (5) NW

B BIO 200 Introductory Biology II For students intending to take advanced courses in the biological sciences or enroll in pre-professional programs. Metabolism and energetics, structure and function of biomolecules, cell structure and function, animal development. Second course in a three-quarter series (B BIO 180, B BIO 200, B BIO 220). Prerequisite: B BIO 180; either B CHEM 152 or B CHEM 153. (5) NW

B BIO 220 Introductory Biology III For students intending to take advanced courses in the biological sciences or enroll in pre-professional programs. Animal physiology, plant development and physiology. Final course in a three-quarter series (B BIO 180, B BIO 200, B BIO 220). Prerequisite: B BIO 200. (5) NW

B BIO 230 Study Abroad: Biology Lower-division biology courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. (1-5, max. 15) NW

B BIO 231 Genes, Genomes and Heredity Explores basic concepts of heredity, including DNA structure and function, Mendel's rules of inheritance, and human genetic diseases. Goals include understanding current issues in the field, including genetic screening and testing, DNA fingerprinting and forensic analysis, the genetic basis of cancer, and genetically modified organisms. Offered: jointly with BISSTS 231. (5) I&S/NW

B BIO 232 Embryos, Genes and Reproductive Technology Explores human reproduction, embryonic development, and genetic technology. Explores the increasing use of technology used in reproduction and related issues (e.g. in vitro fertilization, genetic selection of embryos, cloning, stem cells). Offered: jointly with BISSTS 232. (5) I&S/NW

B BIO 233 Cancer: Biology, Risk, and Treatment Addresses the basic biology of cancer, genetic and environmental risk factors, and treatment options. Cancer is the second leading cause of death in the U.S, but improvements in detection and treatment are changing the way we think about and live with it. Offered: Sp. S. MCNABB (5) NW

B BIO 240 Fundamentals of Cellular Biology for Nursing and Allied Health Survey of cell biology, including macromolecules, cellular metabolism and reproduction, genetics, molecular biology, and evolution, especially as they apply to organisms. Lectures and weekly lab exercises. Intended for students pursing nursing or allied health degrees; not intended for biology majors. Prerequisite: minimum grade of 2.0 in either B CHEM 115 or B CHEM 143/B CHEM 144. (5) NW

B BIO 241 Human Anatomy and Physiology I for Nursing and Allied Health First in a two-quarter sequence. Structure and function of the human body, specifically the integumentary, skeletal, muscular, and nervous systems. Uses models, skeletons, microscope slides, photographs, and animal dissections. Intended for students pursuing nursing or allied health degrees; not intended for biology majors. Prerequisite: minimum grade of 2.0 in either B BIO 220 or B BIO 240. (6) NW

B BIO 242 Human Anatomy and Physiology II for Nursing and Allied Health Second in a two-quarter sequence. Structure and function of the human body, specifically the endocrine, respiratory, cardiovascular, digestive, urinary, and reproductive systems. Uses models, microscope slides, photographs, and animal dissections. Intended for students pursing nursing or allied health degrees; not intended for biology majors. Prerequisite: B BIO 241. (6) NW

B BIO 260 Medical Microbiology Biology of microorganisms. Prokaryotic cell structure, function, metabolism, genetics, and biotechnology. Medical aspects of microbiology: disease mechanisms, transmission and control; human defense mechanisms; and antimicrobial drugs. Includes labs. Intended for nursing and allied health degrees; not intended for biology majors. Prerequisite: either B CHEM 115 or B CHEM 143/B CHEM 144; either B BIO 200 or B BIO 240. (6)

B BIO 285 Seminar in Biology Supervised readings and group discussion on a specific area of biology. Topics vary with instructor. Offered: jointly with BIS 285. (3, max. 9) I&S/NW

B BIO 293 Special Topics in Biology Explores selected topics in biology. (2-5, max. 15)

B BIO 305 The Science and Ethics of Stem Cells Combines study of stem cell biology with discussion of bioethical issues surrounding stem cell research; include laboratory sessions. Examines media portrayals of stem cell science and claims of proponents and opponents of stem cell research. Offered: A. White (5) I&S/NW

B BIO 310 Brain and Behavior Interdisciplinary exploration of the biological basis of human behavior, including altruism, aggression, learning, communication, and mating. Draws on neuroanatomy, neuroscience, endocrinology, ethology, genetics, and sociobiology to examine how the brain influences, and is influenced, by behavior. Readings include primary literature as well as popular publications. Offered: Sp. White (5) NW

B BIO 330 Marine Biology Investigates how marine life adapts to ocean habitats from deep-sea vents to tropical coral reefs by exploring animal behavior, physiology, evolution, and ecology. Fieldtrips required, including an overnight to Friday Harbor Lab. Prerequisite: minimum grade of 2.0 in either B BIO 180 or BIOL 180. ; recommended: B BIO 200, B BIO 220. (5) NW

B BIO 335 Salmon and Society Exploration of the complexities of salmon biology, management, and conservation from local to international scales, and the cultural, historical, and political contexts in which management decisions are made. Prerequisite: B BIO 180 Offered: A. J. Jensen (5) I&S/NW

B BIO 351 Principles of Anatomy and Physiology I Examines basic principles of anatomy and physiology at the cellular, tissue, and organismal levels. Considers adaptations in a broad range of animals, including humans, covering homeostasis, endocrinology, cellular neuroscience, higher brain function, sensory systems, and reproduction. Prerequisite: B BIO 220. Offered: AW. D. Wacker (5) NW

B BIO 352 Principles of Anatomy and Physiology II Examines anatomy and physiology at the cellular, tissue, and organismal levels. Considers adaptations in a range of animals, including humans, covering skeletal systems, muscle physiology, cardiovascular systems, respiration, osmoregulation, digestion, and energy balance. Prerequisite: B BIO 220 or BIOL 220; recommended: B BIO 351. Offered: WSp. J. Jensen (5) NW

B BIO 355 Behavioral Endocrinology Explores how endocrine and neural systems interact to modulate complex behavior. Takes a comparative approach, covering the endocrine and neural bases of behavior in multiple vertebrate taxa. Topics are introduced in lecture then explored through student-led discussion of primary and secondary literature. Prerequisite: B BIO 200. Instructors: Wacker (5) NW

B BIO 360 Introduction to Genetics Explores principles of heredity including gene transmission, classical genetics, mutation, chromosomal mapping, and molecular genetics, including recombinant DNA and DNA analysis. Prerequisite: minimum grade of 2.0 in B BIO 200. (5) NW

B BIO 364 Biochemistry I First quarter of biochemistry covering macromolecules, including proteins and enzymes. Includes chemical structure of biological

molecules and their interactions, how cells synthesize and degrade biological molecules, and how these activities are organized. Emphasizes how biochemical processes interrelate. Prerequisite: either both B BIO 200 and B CHEM 237, or B CHEM 239. Instructors: White Offered: jointly with B CHEM 364; A. (5) NW

B BIO 365 Biochemistry II Second quarter of biochemistry, covering chemistry of major metabolic pathways, including glycolysis, the Krebs cycle, electron, transport, and metabolism of amino acids and fatty acids. Prerequisite: B BIO 364/B CHEM 364. Offered: jointly with B CHEM 365; W. (5)

B BIO 366 Biochemistry Laboratory Prerequisite: Minimum 2.0 in B BIO 364 or B CHEM 364. Offered: jointly with B CHEM 366. (3) NW

B BIO 370 Microbiology Explores microbiology, including microbial diversity, survival strategies, metabolism, habitats, ecology, and evolution. Covers methods used to study microbes, and the impact of microorganisms on engineering and human health. Includes laboratory. Prerequisite: B BIO 200; either B CHEM 162 or B CHEM 163. Offered: A. Hillesland (5) NW

B BIO 372 Stem Cells Explores stem cell biology, molecular and cellular research techniques, disease pathology, and stem cell therapies. Emphasis on primary literature and student led projects. Offered: W. B. WHITE (5)

B BIO 375 Molecular Biology Molecular biology, focusing on structure and synthesis of informational macromolecules. Includes DNA replication and repair, chromosome structure, synthesis and processing of RNA and proteins, regulatory RNAs, amino acid metabolism, and protein trafficking and degradation. Prerequisite: B BIO 220; one of B BIO 360, B BIO 364, B CHEM 364, GENOME 361, or BIOC 405. Offered: jointly with B CHEM 375; Sp. (5)

B BIO 380 Cell Biology Studies the biology of the cell, cell structure and organization, and cellular function. Covers membrane systems, information flow within cells, cell recognition, cell signaling, and malignancy, emphasizing molecular approaches to the study of cells. Prerequisite: B BIO 200. Instructors: Servetnick (5) NW

B BIO 383 Bioinformatics Covers principles of bioinformatics. Students develop a working knowledge of computational tools to analyze biological datasets, including DNA and protein sequence databases. Includes topics such as: database searching, sequence alignment (DNA, RNA, and protein), BLAST, phylogeny, evolution, functional genomics, gene expression/microarray analysis, and protein analysis. Offered: jointly with CSS 383. Kraemer (5) NW

B BIO 385 Animal Behavior Examines the ultimate (evolutionary) and proximate (mechanistic) causes of animal behavior. Topics are introduced in lecture, explored through student-led discussion of primary literature, and put into action with student collection of behavioral data at the zoo and in the field. Prerequisite: B BIO 220. Offered: W. D. WACKER (5) NW

B BIO 393 Special Topics in Biology Explores special topics in biology. (2-5, max. 20)

B BIO 394 Special Topics in Neuroscience Allows students to delve into depth in a specific area of neural science through the discussion of peer-reviewed scientific articles. Specific topics vary by instructor and iteration. Recommended: B BIO 351 Offered: AWSp. A. Lewis, D. Wacker, B. White (5, max. 15) NW

B BIO 430 Study Abroad: Advanced Biology Upper-division biology courses for which there are no direct University of Washington Bothell equivalents, taken through a University of Washington study abroad program. (1-5, max. 15) NW

B BIO 460 Developmental Biology Studies the biology of embryonic development. Covers major features of development of vertebrates and invertebrates. Topics include: morphological features of early development (fertilization, cleavage, gastrulation,

establishment of the body plan), cell determination, pattern formation, molecular biology of early embryos, and introduction to evolutionary developmental biology. Prerequisite: B BIO 360. Instructors: Servetnick Offered: Sp. (5) NW

B BIO 466 Evolution Explores evolution using experiments and simple algebraic models, explains processes underlying observed patterns (e.g., evolution of HIV), predicts outcomes (e.g., health and crop management), and depicts and interprets relationships. Prerequisite: B BIO 180. (5) NW, QSR

B BIO 470 Microbiology II: Microbial Interactions Covers microbial genetics and genomics, methods in microbial ecology and evolution, virology, symbiosis, pathogenesis, evolution of cooperation and virulence. Requires reading primary literature in microbiology and evolution. Includes development of scholarship and grant writing skills in microbiology. Prerequisite: B BIO 370. Instructors: K. HILLESLAND. Offered: W. (5)

B BIO 471 Plant Ecology Explores the evolution and ecology of plants, starting at the scale of a plant individual to populations to community interactions to ecosystem dynamics. Topics covered in lecture and explored through student-led discussion of primary literature. Includes student collected field and greenhouse data. Prerequisite: B BIO 180. Offered: Sp. C. CHANG (5) NW

B BIO 480 Neurobiology Studies the biological aspects of the brain and nervous systems, and the effects of these systems on morphology, physiology, and behavior. Advanced concepts in neurophysiology, cell/molecular neuroscience, neural development, and neuropathology. Prerequisite: minimum grade of 2.0 in B BIO 351 and B BIO 310. Offered: Sp. D. WACKER (5) NW

B BIO 485 Advanced Seminar in Biology Supervised readings and group discussion on a specific area of biology. Topics Vary. Prerequisite: B BIO 220. (1-3, max. 6)

B BIO 495 Investigative Biology Provides research experience in Biology. Topic and research methods vary. Prerequisite: B BIO 220; and one of B MATH 215, B HLTH 215, or STMATH 341. (5) NW, QSR

B BIO 498 Independent Study in Biology independent study on a topic or area agreed upon by the instructor and student. Prerequisite: B BIO 220. (1-5, max. 15)

B BIO 499 Undergraduate Research in Biology Undergraduate research on a topic agreed upon by the instructor and student. Prerequisite: B BIO 220. (1-5, max. 20)

Computer Engineering

B CE 495 Capstone Design I The first of a two-sequence capstone course where students work on projects to design systems, components or processes with specific design constraints. Students define design problems and present the first round of their designs. Prerequisite: minimum grade of 2.0 in B EE 331; minimum grade of 2.0 in CSS 360; minimum grade of 2.0 in B EE 371 or CSS 350; and minimum grade of 2.0 in B EE 425 or CSS 422. All courses may be taken concurrently. (2)

B CE 496 Capstone Design II The second of a two-sequence capstone course where students work on projects to design systems, components or processes with specific realistic design constraint. Students refine and complete, build, and test their design work. Prerequisite: B CE 495. (3)

Chemistry

B CHEM 110 Chemistry and Life Survey course exploring the chemistry of life. Topics include the molecular nature of all life, chemical processes of living organisms, chemistry of food, air, water, nutrition, pollution, genetic engineering, and drug design. Material includes basic chemical principles related to explored topics. No prior chemistry knowledge assumed. Offered: jointly with BST 110; A. (5) NW

B CHEM 115 Introductory Chemistry I Covers atomic nature of matter, chemical reactions, stoichiometry, solution chemistry, atomic theory, chemical bonding, gas laws, and acid/base reactions. First in a three-quarter sequence designed for non-majors or students interested in pursuing a health studies field like nursing or public health. Includes laboratory. Offered: AW. (5) NW, QSR

B CHEM 139 Preparation for General Chemistry Provides preparation for taking the yearlong General Chemistry sequence. Covers the language of chemistry and develops proficiency and skills in mathematical concepts that are applied to the quantitative topics in chemistry. Offered: A. (5) NW

B CHEM 143 General Chemistry I Covers atomic nature of matter, chemical reactions, stoichiometry, solution chemistry, atomic theory, chemical bonding, molecular geometry and structure. First of a three-quarter sequence for science and engineering majors. Prerequisite: either minimum grade of 2.0 in B CHEM 139, or minimum grade of 2.5 in one of the following: B MATH 122, B MATH 123, MATH 120, STMATH 124, MATH 124, STMATH 125, MATH 125, STMATH 126, or MATH 126, or a score of 145-153 on the MPT-AS assessment test, or a score of 151 or higher on the MPT-GS assessment; recommended: High School Chemistry. Offered: AW. (4) NW, QSR

B CHEM 144 General Chemistry Lab I Laboratory experience designed to complement the knowledge gained in B CHEM 143. Emphasizes collection and analysis of laboratory results in a well prepared laboratory notebook. Prerequisite: minimum grade of 2.0 in B CHEM 143, which may be taken concurrently. Offered: AW. (2) NW, QSR

B CHEM 153 General Chemistry II Covers energy, enthalpy, thermochemistry, gas laws, properties of solutions, solids, entropy, free energy, spontaneity, and organic chemistry. Second of a three-quarter sequence for science and engineering majors. Prerequisite: minimum grade of 2.0 in B CHEM 143. Offered: WSp. (4) NW, QSR

B CHEM 154 General Chemistry Lab II Laboratory experience designed to complement the knowledge gained in B CHEM 153. Continued emphasis placed on quality results with the addition of writing sections of a standard lab report. Prerequisite: minimum grade of 2.0 in B CHEM 144; minimum grade of 2.0 in B CHEM 153, which may be taken concurrently. Offered: WSp. (2) NW, QSR

B CHEM 157 General Learning Strategies for General Chemistry Provides practice in using quantitative tools and techniques introduced during the general chemistry lecture. Allows students to sharpen the reasoning necessary for use in science courses. Includes questions, lecture, and text review, and additional practice problems. Corequisite: either B CHEM 142, B CHEM 152, or B CHEM 162. Offered: AWSpS. (1, max. 3)

B CHEM 163 General Chemistry III Covers chemical kinetics, chemical equilibrium, acids and bases, aqueous equilibria, transition metals and coordination chemistry, organic chemistry, biochemistry, and electrochemistry. Third of a three-quarter sequence for science and engineering majors. Prerequisite: minimum grade of 2.0 in B CHEM 153. Offered: SpS. (4) NW, QSR

B CHEM 164 General Chemistry Lab III Laboratory experience designed to complement the knowledge gained in B CHEM 163. Continued emphasis placed on quality results with the writing of standard lab reports. Prerequisite: minimum grade of 2.0 in B CHEM 154; minimum grade of 2.0 in B CHEM 163, which may be taken concurrently. Offered: SpS. (2) NW, QSR

B CHEM 237 Organic Chemistry I Structure, nomenclature, reactions, and synthesis of the main types of organic compounds. No organic laboratory accompanies this course. First in a three quarter sequence. Prerequisite: minimum of a 2.0 in either B CHEM 162 or B CHEM 163 and B CHEM 164. (4) NW

B CHEM 238 Organic Chemistry II Further discussion of physical properties and transformations of organic

molecules, especially aromatic and carbonyl compounds. Second in a three-quarter sequence. Prerequisite: minimum grade of 1.7 in B CHEM 237. (4) NW

B CHEM 239 Organic Chemistry III Third course for students planning to take three quarters of organic chemistry. Polyfunctional compounds and natural products, lipids, carbohydrates, amino acids, proteins, and nucleic acids. Includes introduction to membranes, enzyme mechanisms, prosthetic groups, macromolecular conformations and supramolecular architecture. Prerequisite: minimum grade of 1.7 in B CHEM 238. (4) NW

B CHEM 241 Organic Chemistry Laboratory I Introduction to organic laboratory techniques. Preparation of representative compounds. Designed to be taken with B CUSP 238. Prerequisite: minimum grade of 1.7 in B CHEM 237; B CHEM 238, which may be taken concurrently. (3) NW

B CHEM 242 Organic Chemistry Laboratory II Preparations and qualitative organic analysis. Designed to be taken with B CHEM 239. Prerequisite: minimum grade of 1.7 in both B CHEM 238 and B CHEM 241; B CHEM 239, which may be taken concurrently. (3) NW

B CHEM 293 Special Topics in Chemistry Explores selected topics in chemistry. (2-5, max. 15)

B CHEM 294 Chemistry Seminar Introduces incoming Chemistry majors to research in chemistry and related disciplines and informs majors about career options for those who obtain a degree in chemistry. Credit/no-credit only. Offered: W. (1, max. 2)

B CHEM 310 Molecular Modeling Introduces students to the most widely used techniques in the field of molecular modeling and computational chemistry. We will spend each week studying a different molecular modeling method, including the theory that underlies the method and how to apply it to relevant research questions in areas such as drug discovery, biochemistry, protein structure prediction, and cheminformatics. Prerequisite: B CHEM 237, B BIO 364, B CHEM 364 (5)

B CHEM 312 Inorganic Chemistry I The first in a two-quarter course sequence in inorganic chemistry for students majoring in chemistry and related subjects like biochemistry and chemical engineering. Concepts include bonding, atomic-molecular structure, symmetry and group theory, oxidation-reductions, and acid-base chemistry in aqueous/non-aqueous media. Prerequisite: minimum 2.0 grade in B CHEM 238. Offered: W. (3) NW, QSR

B CHEM 313 Inorganic Chemistry II The second of a two-quarter course sequence in inorganic chemistry for majors in chemistry and chemical engineering. Includes transition metal chemistry, along with structure and reactivity of organometallic compounds, solid state chemistry, and an introduction to materials chemistry. Prerequisite: minimum 2.0 grade in B CHEM 312. Offered: Sp. (3) NW, QSR

B CHEM 315 Quantitative Environmental Analysis Covers fundamental principles for making quantitative chemical measurements including techniques in stoichiometry, spectroscopy, chromatography, statistics, and potentiometric methods. Includes laboratory. Prerequisite: minimum 2.0 grade in B CHEM 164. Offered: A. (5) NW, QSR

B CHEM 350 Atmospheric Chemistry and Air Pollution Examines the chemistry of the atmosphere and the relationship between air pollution sources, air quality, and human health from both a scientific and policy perspective. Prerequisite: Minimum 2.0 in B CHEM 163 and B CHEM 164. (5) NW, QSR

B CHEM 364 Biochemistry I First quarter of biochemistry covering macromolecules, including proteins and enzymes. Includes chemical structure of biological molecules and their interactions, how cells synthesize and degrade biological molecules, and how these activities are organized. Emphasizes how biochemical processes interrelate. Prerequisite:

either both B BIO 200 and B CHEM 237, or B CHEM 239. Instructors: White Offered: jointly with B BIO 364; A. (5) NW

B CHEM 365 Biochemistry II Second quarter of biochemistry, covering chemistry of major metabolic pathways, including glycolysis, the Krebs cycle, electron, transport, and metabolism of amino acids and fatty acids. Prerequisite: B BIO 364/B CHEM 364. Offered: jointly with B BIO 365; W. (5)

B CHEM 366 Biochemistry Laboratory Prerequisite: Minimum 2.0 in B BIO 364 or B CHEM 364. Offered: jointly with B BIO 366. (3) NW

B CHEM 375 Molecular Biology Molecular biology, focusing on structure and synthesis of informational macromolecules. Includes DNA replication and repair, chromosome structure, synthesis and processing of RNA and proteins, regulatory RNAs, amino acid metabolism, and protein trafficking and degradation. Prerequisite: B BIO 220; one of B BIO 360, B BIO 364, B CHEM 364, GENOME 361, or BIOC 405. Offered: jointly with B BIO 375; Sp. (5)

B CHEM 401 Physical Chemistry I The first in a 2-course physical chemistry sequence. Topics include thermodynamics and its application to chemical systems, properties of ideal and real solutions and systems at equilibrium. Prerequisite: A minimum grade of 2.0 in either B PHYS 123, STMATH 126, or B CHEM 237; and minimum grade of 2.0 in either STMATH 307, STMATH 308, or STMATH 324 Offered: A. (4) NW, QSR

B CHEM 402 Physical Chemistry II The second in a 2-course physical chemistry sequence. Topics include electrochemistry, chemical kinetics and quantum chemistry and its applications to molecular structure and spectroscopy. Prerequisite: minimum grade of 2.0 in B CHEM 401. Offered: W. (4) NW, QSR

B CHEM 403 Physical Chemistry III Introduction to quantum mechanics, molecular structure, spectroscopy, and applications of spectroscopy to molecular systems. The third course in a three-course physical chemistry sequence. Prerequisite: minimum grade of 2.0 in B CHEM 402. Offered: Sp. (4) NW, QSR

B CHEM 404 Physical Chemistry Laboratory Covers the application of physical chemistry laboratory and data analysis techniques. Focuses upon the practical application of laboratory and computational methods used in the study of thermodynamics, statistical mechanics, kinetics, and spectroscopy. Prerequisite: minimum grade of 2.0 in B CHEM 402. Offered: Sp. (4)

B CHEM 426 Instrumental Analysis Introduction to the modern instrumental methods of analysis with emphasis on optical, spectroscopic, electrochemical, and separation techniques. Includes the introductory principles of basic electronics, along with sample preparation and acquisition/treatment of instrumental and computerized data and results. Prerequisite: minimum grade of 2.0 in B CHEM 315. Offered: W. (5) NW, QSR

B CHEM 493 Advanced Topics in Chemistry Covers advanced topics within a particular branch of chemistry (analytical, inorganic, organic, physical, and environmental). Covers topics of current research interest or those in professional demand. (1-5, max. 15)

B CHEM 494 Special Topics in Biochemistry Covers advanced topics in of biochemistry. Covers topics that are in the forefront of current research or those in professional demand. Prerequisite: minimum grade of 2.0 in B CHEM 237; B CHEM 364. (3, max. 12) NW, QSR

B CHEM 495 Investigative Chemistry I Introduction to the research methods used in chemistry and covers such topics as hypothesis formation, literature review, proposal writing, method of development, and data analysis. Writing intensive course that prepares students for B CHEM 496. Prerequisite: minimum grade of 2.0 in each of B CHEM 239, B CHEM 242, and B CHEM 315. (3)

B CHEM 496 Investigative Chemistry II Students perform independent research, analyze, and present

the results of the research in an area of chemistry selected by the instructor. Prerequisite: minimum grade of 2.0 in B CHEM 495. (3)

B CHEM 497 Apprenticeship in Chemistry Education For students interested in pursuing careers in education and in teaching chemistry and science subjects. Involves attending lectures as well as assisting a faculty member teaching a particular lab course. (1-3, max. 6)

B CHEM 498 Independent Study in Chemistry Independent study on a topic or area agreed upon by the instructor and the student. (1-5, max. 10)

B CHEM 499 Undergraduate Research in Chemistry Undergraduate research on a topic or area agreed upon by the instructor and the student. (1-5, max. 10)

Climate Science

B CLIM 200 Introduction to Climate Science Introduces climate science and global climate change. Topics include the scientific method, earth history, global biogeochemical cycles, population and energy consumption, and greenhouse gas emissions; fundamental climate science, energy conservation, alternative energy; climate and the media; and climate policy. Includes service project around issues of energy or climate. Offered: jointly with BST 200. (5) I&S/NW

B CLIM 300 Fundamentals of Weather and Climate Comprehensive introduction to the science of the atmosphere and climate systems including: composition and structure of the atmosphere; atmospheric physics; thermodynamic processes; solar and terrestrial radiation; atmospheric dynamics and large-scale circulation; and climate processes and dynamics. Prerequisite: minimum grade of 2.0 in each of B CUSP 124; B CUSP 125; B PHYS 121; and B PHYS 122. Instructors: Jaffe, Salathe Offered: A. (5) NW

B CLIM 320 Impacts of Climate Change Surveys climate change implications for natural and human systems, both globally and locally. Topics include natural science, human health, and policy issues; climate system processes, air/water quality, ecosystem services, human health, extreme weather, flooding, snow pack, stream flow, vulnerability assessment, adaptation, and mitigation strategies. Offered: Sp. E. SALATHE (5) I&S/NW

Electrical Engineering

B EE 215 Fundamentals of Electrical Engineering Introduction to electrical engineering. Basic circuit concepts. Mathematical models of components. Kirchhoff's laws. Resistors, sources, capacitors, inductors, and operational amplifiers. Solutions of first and second order linear differential equations associated with basic circuit forms. Prerequisite: STMATH 126, or MATH 126; and PHYS 122, or BPHYS 122. (5)

B EE 233 Circuit Theory Electric circuit theory. Analysis of circuits with sinusoidal signals. Phasors, system functions, and complex frequency. Frequency response. Computer analysis of electrical circuits. Power and energy. Two port network theory. Laboratory in basic electrical engineering topics. Prerequisite: minimum grade of 1.5 in B EE 215. (5)

B EE 235 Continuous Time Linear Systems Introduction to continuous time signal analysis. Basic signals including impulses, pulses, and unit steps. Periodic signals. Convolution of signals. Fourier series and transforms in discrete and continuous time. Computer laboratory. Prerequisite: minimum grade of 1.5 in B EE 233; either STMATH 307, MATH 136, MATH 307, or AMATH 351 any of which may be taken concurrently; and PHYS 122 or B PHYS 122; and either CSS 161 or CSE 142, which may be taken concurrently. (5)

B EE 271 Digital Circuits and Systems Overview of digital computer systems. Digital logic, Boolean algebra, combinational and sequential circuits and logic design, programmable logic devices, and the design and operation of digital computers, including ALU, memory, and I/O. Weekly laboratories.

Prerequisite: either CSS 132, CSS 142, CSE 142, or CSS 161 (5)

B EE 331 Devices and Circuits I Physics, characteristics, applications, analysis, and design of circuits using semiconductor diodes and field-effect transistors with an emphasis on large-signal behavior and digital logic circuits. Classroom concepts are reinforced through laboratory experiments and design exercises. Prerequisite: minimum grade of 1.7 in either B EE 233 or E E 233. (5)

B EE 332 Devices and Circuits II Examines the characteristics and models of bipolar and field-effect transistors, linear acircuit applications, including low and high frequency analysis of differential amplifiers, currents sources, gain stages and output stages, circuitry of op-amps, their configurations, stability and compensation. Prerequisite: minimum grade of 1.8 in B EE 331. (5)

B EE 341 Discrete Time Linear Systems Discrete time signals and systems, impulse response, convolution, Z-transforms, discrete time Fourier analysis. Computer laboratory. Prerequisite: minimum grade of 1.7 in either B EE 235 or E E 235. (5)

B EE 361 Applied Electrodynamics Introductory electromagnetic field theory and Maxwell's equations in integral and differential forms; uniform plane waves in linear media; boundary conditions and reflection and transmission of waves; guided waves; transmission lines and Smith chart; and electrostatics. Prerequisite: minimum grade of 2.0 B EE 233; STMATH 324; B PHYS 123. (5)

B EE 371 The Business of Technology Methods for aiding software development, communicating progress to customers/management, and developing marketing strategies for the product. Incorporates social, psychological, and ethical issues. May not be repeated. Offered: jointly with CSS 371. Berger (5)

B EE 381 Introduction to Electric Power Generation Reviews the design and operation of power plants for the generation of electric power. Covers thermodynamic principles of energy conversion, cycle analysis, combustion, nuclear and hydroelectric power, emerging energy technologies, plant economics, emission controls, and environmental impact. Prerequisite: STMATH 126 or MATH 126; and B PHYS 122. Offered: jointly with BST 381. (5) NW, QSR

B EE 417 Digital Communication Covers the basic principles and techniques of digital signal transmission and reception. Examines the process of converting analog signals to digital formats, explores various digital modulation schemes, analyzes the limitation imposed by noise on communication systems, and studies the design of optimum receivers. Prerequisite: minimum grade of 1.5 in B EE 341; STMATH 390. STMATH 390 may be taken concurrently. (5)

B EE 425 Microprocessor System Design Examines the specification, design of a microprocessor-based computer system that are dedicated to specific application. Covers low-level programing, memory systems, I/O and system debugging. Students design an embedded microprocessor system using computer-aided design tools. Prerequisite: minimum grade of 2.0 in B EE 271 and B EE 331. (5)

B EE 433 Electronic Circuit Design Provides an understanding of modern analog solid-state circuit design techniques what are used for instrumentation purposes. Emphasizes design techniques using integrated circuits, particularly operational amplifiers. Prerequisite: minimum grade of 1.5 in B EE 332. (5)

B EE 436 Biomedical Instrumentation I Introduction to the basic principles of medical electronic instruments. Covers biopotentials, biosignal amplifiers, electrical safety, the design of clinical electronics and FDA regulations. Students design biomedical signal measurement systems using analog and digital circuits and perform biomedical signal analysis. Prerequisite: B EE 235; B EE 332. (5)

B EE 437 Biomedical Instrumentation II Introduction to the principles of measuring human vital signals

such as blood pressure, heart rate, and respiratory rate. Covers medical imaging techniques (CT, MRI, PET) and working principal of clinical ultrasound systems. Students design biomedical signal measurement systems and perform basic biomedical image and signal analysis. Prerequisite: B EE 332. (5)

B EE 440 Electronic Test and Measurement Introduction to the principle of metrology and modern electronic testing and measurement. Topics covered include types of testing and design-for-testability techniques such as scan-path, boundary scan and built-in-self test. The understanding of theoretical concepts of testing related subjects are augmented through extensive lab projects using Verilog and Labview tools. Prerequisite: B EE 271. Offered: Sp. (5)

B EE 442 Digital Signal Processing Examines methods and techniques of digital signal processing. Reviews sampling theorems, A/D and D/A converters, demodulation by quadrature sampling, Z-transform methods, linear shift-invariant systems, difference equations, signal flow graphs for digital networks, canonical forms, design of digital filters, practical considerations, IIR and FIR filters; and digital Fourier transforms and FFT techniques. Prerequisite: minimum grade of 1.5 in B EE 341. (5)

B EE 445 Fundamentals of Digital Image Processing Introduction to digital image processing emphasizing image processing techniques, image filtering design and its applications. Topics include mathematical foundations for digital manipulation of images; image pre-processing; spatial and frequency-domain filtering, morphological transformations and segmentation. Theoretical foundations and practical applications. Computer Laboratory. Prerequisite: minimum grade of 2.0 in BEE 233. (5)

B EE 447 Introduction to Control Systems Provides an introduction to analysis and design of control systems with applications ranging across electrical, mechanical, and electromechanical systems. Topics include system modeling, performance and stability analysis using root locus, Bode and Nyquist plots, and designs of PID and lead-lag compensators. Prerequisite: minimum grade of 1.5 in B EE 235. (5)

B EE 450 Introduction to Power Electronics Introduction to power electronics. Topics covered include characterization of power semiconductor devices, design of magnetic components and filters, analysis and design of ac-to-dc, dc-to-dc and dc-to-ac power converters. Applications in power supplies are presented. Theoretical concepts and analyses are augmented by simulations and lab projects. Prerequisite: Minimum grade of 2.0 in BEE 331 or equivalent. (5)

B EE 451 Introduction to MEMS Develops the basics for microelectromechanical devices (MEMS) including micro-actuators, micro-sensors, and micro-motors, principles of operation, different micromachining techniques (surface and bulk micromachining), IC-derived microfabrication techniques, thin-film technologies as they apply to MEMS. Prerequisite: B EE 215; B EE 233; B EE 331; recommended: Fundamental circuit and electronic classes for EE major and design classes for CompE major (5)

B EE 454 Introduction to RF and Microwave Engineering Theory of transmission lines and microwave network analysis techniques are sued to design passive microwave devices. Topics include operational properties of active microwave circuits, antennas, and electromagnetic waves. RF, microwave RADAR and remote sensing systems. Prerequisite: minimum grade of 2.5 in B EE 361, B EE 331, or B EE 332. (5)

B EE 455 Introduction to Electrical Machines and Drives Introduction to electrical machines and drives. Topics covered include principles and analyses of electromechanical systems including dc, synchronous and induction machines, both motors and generators. Control strategies for the different machine types are presented. Theoretical concepts are augmented by simulation tools and lab projects. Prerequisite: Minimum grade of 2.0 in BEE 233 or equivalent. (5)

B EE 477 Power System Fundamentals Basic power system analytical concepts, three-phase systems, impedance, steady-state network analysis, normalization, transmission lines, transformers, and synchronous machines. Prerequisite: minimum grade of 1.5 in B EE 233. Instructors: Ghofrani (5)

B EE 478 Power System Analysis Topics include the iteration and simulation techniques as well as the numerical solutions required to analyze power and energy systems; power flow; symmetrical components; and faulted system analysis and stability study. Prerequisite: minimum grade of 1.5 in B EE 477. M. Ghofrani (5)

B EE 482 Semiconductor Devices Covers fundamentals of semiconductor theory: carrier diffusion and drift; concept of direct and indirect energy gap materials, effective mass of mobile carriers; device physics; homo- and heterojunctions, metal-semiconductor junction, bipolar transistor, and MOS transistors. Prerequisite: minimum grade of 1.5 in B EE 332. (5)

B EE 484 Sensors and Sensor Systems Focuses on understanding a broad variety of sensor technologies and their application as systems in everyday use. Provides both a foundation to move into a particular area of sensor technology and also a means to apply appropriate sensors for particular applications. Prerequisite: minimum grade of 1.5 in both B EE 235 and B EE 331. (5)

B EE 486 Fundamentals of Integrated Circuit Technology Introduces the fundamentals of IC technologies. Covers the microelectronic processing technology, including evaporation, sputtering, epitaxial growth, diffusion, ion implantation, oxidation, chemical vapor deposition, and photoresists. Introduces the design considerations for transistors, materials and process characterization, and future trends. Prerequisite: minimum grade of 1.5 in B EE 332. (5)

B EE 490 Special Topics in Electrical Engineering Explores special topics in electrical engineering. (1-5, max. 10)

B EE 495 Capstone Project in Electrical Engineering I First of a two-course sequence capstone design experience. Students design a system, component, or process with specific realistic design constraint such as cost, engineering standards, and social impact. Prerequisite: minimum grade of 1.5 in each of B EE 332, B EE 371, and B EE 425 which may be taken concurrently. Offered: AWSp. (2)

B EE 496 Capstone Project in Electrical Engineering II Second of a two-course sequence capstone design experience. Individual or small-team project that is representative of the solution to an open-ended design problem in electrical engineering. May be undertaken as part of an industrial internship with direct supervision of the EE faculty and industrial sponsor. Includes many aspects of an industrial research and development product development lifecycle. Prerequisite: minimum grade of 1.5 in B EE 495. Instructors: Berger, Ghirmai Offered: AWSp. (3)

B EE 498 Independent Study in Electrical Engineering Independent study on a topic or area agreed upon by the instructor and student. (1-5, max. 10)

B EE 499 Undergraduate Research in Electrical Engineering Undergraduate research on a topic agreed upon by the instructor and student. (1-5, max. 20)

B EE 503 Circuit Analysis Introduction to basic circuit elements. Analysis of DC and AC circuits consisting of resistors, capacitors, inductors, voltage and current sources using ohm's law, Kirchhoff's laws, and other circuit theorems. Power and energy. Transient and steady-state analysis of basic electric circuits using Laplace-transform. Introduction to operational amplifier. Includes laboratory. (4)

B EE 504 Device Electronics Introduces the characteristics and application of three electronic devices, diodes, field-effect and bipolar junction transistors. Topics include physics and characteristics

of the devices, small-signal and large-signal analysis, operational amplifiers and design of digital logic circuits. Laboratory. Prerequisite: minimum grade of 1.5 in BEE 503. (4)

B EE 505 Digital Systems Introduction to the design and understand of digital circuits and systems. Topics include: digital logic gates, Boolean algebra, logic minimization using Karnaugh Maps, sequential and combinational circuit design, digital building blocks such as decoders and multiplexers, number representation in digital circuits. (2)

B EE 506 Power Systems Basic power system analytical concepts, three-phase systems, phasors, impedance, normalization, transmission lines, and transformers. Prerequisite: minimum grade of 2.0 in B EE 503. M. GHOFRANI (2)

B EE 507 Signals and Systems Introduces representation and classifications of continuous and discrete time signals. Topics include time domain analysis of Linear Time Invariant (LTI) systems; Fourier Transform for continuous and discrete-time signals/systems; Laplace-transform and z-transforms, and their application for system analysis. Includes laboratory. Prerequisite: minimum grade of 3.0 in B EE 503. (4)

B EE 509 Engineering Simulations Provides an introduction to simulations techniques to solve engineering problems. Industry standard simulation tools such as MATLAB, SPICE, and LabView are introduced and intensively used in simulating design and analysis from several disciplines of electrical engineering such as signal processing, circuit design, system fault analysis, and instrumentation interface. (2)

B EE 510 Probability and Random Processes for Electrical Engineering Covers basic probability and random processes and their applications to engineering. Topics include probability concepts, random variables and vectors, expectations, moments, moment-generating and characteristic functions, random processes, auto-correlation, power spectral density, linear filtering of random signals, and introduction to estimation and detection. Prerequisite: STMATH 390 or equivalent. (5)

B EE 511 Signal Processing I Introduces basic digital signal processing techniques for analysis of systems and designing of digital filters. Topics include time-domain and frequency-domain analysis of discrete-time signals and systems, z-transforms; FFT; sampling and reconstruction; design of digital filters; and multi-rate signal processing. (5)

B EE 512 Signal Processing II Introduces statistical signal processing which deals with random signals, their modeling, characterization, and transformation to extract useful information about the underlying mechanism that generates them. Topics include: signal modeling; optimum filtering; linear prediction and estimation; spectrum estimation; and adaptive filtering. Prerequisite: B EE 510; B EE 511. (5)

B EE 515 Digital Image Processing Applications Focuses on image processing techniques, image filtering design, and its applications to images acquired from various imaging techniques. Topics include spatial and frequency-domain image filtering, image reconstruction, image segmentation, color, and morphological transformation techniques, understanding and replicating methodologies from research papers. Computer Laboratory. Prerequisite: minimum 2.7 in BEE 510. (5)

B EE 520 Predictive Learning from Data Concepts of predictive learning algorithms for supervised and unsupervised learning tasks. Topics include linear models (regression, linear discriminant analysis), decision trees, nearest neighbor, Gaussian mixture models, support vector machines, neural networks, Bayesian inferencing, Hidden Markov Models, and clustering. Computer Laboratory in MATLAB and cloud-computing platform. Prerequisite: 2.7 in BEE 510. (5)

B EE 525 Embedded Systems Design Focuses on course design, testing, and validation of modern embedded systems and systems-on-silicon. Topics

include introduction to embedded programming languages for hardware and software, designing with FPGA cores, real-time operating systems, and modern synthesis tools. Prerequisite: Either B EE 425, CSS 427 or equivalent microprocessor courses, industrial experience or consent of the instructor. (5)

B EE 526 Advanced Topics in Embedded Systems Design Focuses on debugging, validation and system integration of embedded systems and systems-on-silicon. Topics include design and validation of mission-critical hardware and software, performance optimization techniques and hardware-assisted debug and validation. Prerequisite: A minimum grade of 2.5 in either B EE 425, CSS 427, or B EE 525. (5)

B EE 531 Acoustical Engineering: Fundamentals Covers underlying physics of underwater acoustics and of medical ultrasound systems. Gives to students a means of estimating important ultrasound parameters using numerical simulations, algebraic techniques, and laboratory-based measurements. As part of their work students will design a basic ultrasound device Prerequisite: working knowledge of MATLAB and wave physics. (5)

B EE 532 Acoustical Engineering: Medical Devices Analysis of advanced applications of diagnostic and therapeutic ultrasound systems to rain and to peripheral tissue. Algebraic estimation of physical forces exerted by ultrasound and of associated biological responses. Literature review of ultrasound application to brain and peripheral tissue. Prerequisite: minimum grade of 2.0 in B EE 531. Offered: W. P. MOURAD (5)

B EE 533 Biomedical Devices and Instrumentation Introduction to biopotential signal; design and analysis of biomedical devices and instrumentation to acquire biosignal. FDA regulation consideration; introduction to medical imaging and signal processing including ultrasound imaging. Hardware design and simulations. There is a lab component in the class. (5)

B EE 542 Solar Cells Provides balanced study of various solar cell technologies by covering renewable energy resources, photovoltaic basics and systems, the state-of-the-art solar cell technologies, manufacturing advancement, and current engineering challenges. Also provides hands-on experience in solar cell fabrication and characterization. (5)

B EE 545 Complementary Metal Oxide Semiconductors I Studies complementary metal oxide semiconductor (CMOS) technology by offering circuit analysis, fabrication technology, and characterizations. Introduction to the physics and characters of basic CMOS circuits, the fundamental fabrication technologies for CMOS-based integrated circuits, and measurement characterization for CMOS inverters. (5)

B EE 546 CMOS II Provides hands-on laboratory experience for fabrication and testing of CMOS transistors. CMOS inverters will be fabricated and tested. Various CMOS fabrication technologies and equipment will be used including a mask aligner, furnace, metal sputter, and spin-coater. Prerequisite: 2.7 or greater in B EE 545 CMOS I. (5)

B EE 550 Introduction to Power Electronics Introduction to power electronics. Topics covered include characterization of power semiconductor devices, design of magnetic components and filters, analysis and design of ac-to-dc, dc-to-dc and dc-to-ac power converters. Applications in power supplies are presented. Theoretical concepts and analyses are augmented by simulations and lab projects. Prerequisite: Minimum grade of 2.0 in BEE 331 or equivalent. (5)

B EE 551 Introduction to MEMS Develops the basics for microelectromechanical devices and systems including micro-actuators, micro-sensors, and micro-motors, principles of operation, different micromachining techniques (surface and bulk micromachining), IC-derived microfabrication techniques, thin-film technologies as they apply to MEMS. (5)

B EE 552 Biomedical Microsystems Develops multidisciplinary knowledge in microfabrication, sensor development, surface modification essential for designing and implementing biomedical devices and systems. Specific real-world systems will be fabricated, characterized and optimized. Prerequisite: B EE 551 (5)

B EE 555 Introduction to Electrical Machines and Drives Introduction to electrical machines and drives. Topics covered include principles and analyses of electromechanical systems including dc, synchronous and induction machines, both motors and generators. Control strategies for the different machine types are presented. Theoretical concepts are augmented by simulation tools and lab projects. Prerequisite: Minimum grade of 2.0 in BEE 233 or equivalent. (5)

B EE 571 Power System Analysis Topics include the iteration and simulation techniques as well as the numerical solutions required to analyze and power and energy systems; power flow; symmetrical components; faulted system analysis; stability study; and computer usage to simulate large-scale power systems. M. GHOFRANI (5)

B EE 572 Power System Operations Topics include: electric power grid and its operation in the United States; characteristics of generating units; power/load flow analysis; economic dispatch; unit commitment; optimal power flow; and introduction of renewable energy generation such as wind and solar energy and their integration into the grid. Prerequisite: minimum grade of 1.5 in B EE 571. M. GHOFRANI (5)

B EE 590 Special Topics in Electrical Engineering Address contemporary topics in electrical engineering focused on emerging methods and technologies, critical issues facing disciplines within and connected with trends in research, critical theory and/or other topics important to the field. (5, max. 15)

B EE 599 Electrical Engineering Graduate Seminar Examines current research and technological trends in electrical engineering and related fields of interest of UWB faculty. Faculty demonstrate how to lead a seminar session, followed by graduate students leading the seminar session in the following week and presenting their own research findings. (1)

B EE 600 Independent Study or Research Graduate research on electrical engineering topics conducted under the direction of one or more instructors (*-)

B EE 601 Internship Graduate internship under the supervision of an EE faculty member. Credit/no-credit only. (1-10, max. 15)

B EE 700 Master's Thesis Graduate Research to prepare for and complete the requirements for a thesis defense. Credit/no-credit only. (*-)

Engineering

B ENGR 310 Computation Physical Modeling Computational methods for analyzing mathematical representations of physical processes. Development of judgment for mathematical tool selection and identification of plausible but incorrect computational solutions and movement to correct solutions. Taught via in-class examples and programming with computational linear algebra manifest in MATLAB. Prerequisite: minimum grade of 2.0 in STMATH 307. Offered: AW. P. MOURAD (5)

B ENGR 320 Fundamentals of Materials Science Properties of metals, ceramics, polymers, and composites in relation to their internal subatomic, microscopic, and macroscopic structures. Incorporates materials testing, analysis of failure, and engineering of materials to achieve desired function and performance. Includes laboratory. Prerequisite: minimum grade of 1.5 in B CHEM 143/B CHEM 144. Offered: A. (5)

Mechanical Engineering

B ME 221 Statics Applies vector analysis to equilibrium of rigid body systems and subsystems.

Includes force and moment resultants, free body diagrams, internal forces, and friction. Analyzes basic structural and machine systems and components. Prerequisite: minimum grade of 2.0 in either STMATH 126 or MATH 126; minimum grade of 2.0 in either B PHYS 121 or PHYS 121. (4)

B ME 222 Mechanics of Materials Introduces deformations of solids in response to external loads and effects of deformations on stability and material behavior. Develops basic relationships among loads, stresses, and deflections of structural and machine elements such as rods, shafts, and beams. Includes laboratory. Prerequisite: minimum grade of 2.0 in B ME 221. Offered: W. (4)

B ME 223 Dynamics Kinematics of particles, systems of particles, and rigid bodies; moving reference frames; kinetics of particles, systems of particles, and rigid bodies; equilibrium, energy, linear momentum, angular momentum. Includes laboratory. Prerequisite: minimum grade of 2.0 in B ME 221. Offered: Sp. J. Bridge, W. Yoon (4) C

B ME 293 Special Topics in Mechanical Engineering Explores special topics in mechanical engineering. (1-5, max. 15)

B ME 315 Introduction to 3D Modeling, Design, and Analysis Design, representation, and analysis of three-dimensional objects using computational methods and computer-aided design (CAD). Topics include free hand sketching, optimization of design parameters, documentation and communication of design information using appropriate engineering standards and practices. Prerequisite minimum grade of 1.5 in B ME 222. Offered: W. S. COLLINS, E. SCOTT (5) VLPA

B ME 331 Thermodynamics First and Second Laws of thermodynamics, and their application in open and closed systems. Includes thermodynamic properties of substances, gas laws, entropy, power and refrigeration cycles. Prerequisite: minimum grade of 1.7 in B CHEM 143; B CHEM 144; STMATH 307; and B PHYS 121. S. Collins (4)

B ME 332 Thermal Fluids II Momentum transfer in internal and external fluid flow, analysis of fluid flow systems, and fluid flow in conjunction with convective heat transfer. Prerequisite: B ME 331, ST MATH 324. Offered: W. S. Collins, E. Scott (4)

B ME 333 Thermal Fluids III Prerequisite: Prerequisite minimum grade of 1.5 in B ME 332. Offered: Sp. J. Bridge, S. Collins, E. Scott (4)

B ME 334 Thermal Fluids Lab Weekly lab experiments designed to introduce students to the basics of experimentation, instrumentation, data collection and analysis, error analysis, report writing, and teamwork skills. Topics will include fluid mechanics and heat transfer. Prerequisite: minimum grade of 1.7 in B ME 331; minimum grade of 1.7 in B ME 332; and minimum grade of 1.7 in B ME 333 Offered: A. (2)

B ME 341 Mechanical Systems Design I Mechanical analysis of machine components. Topics include load analysis, advanced strength of materials, fatigue and reliability, screw devices, bolted/welded joints, fasteners, shafts, clutches, belts, and chains. Prerequisite: minimum grade of 1.7 in B ENGR 320; B ME 223. Offered: W. S. Collins (5)

B ME 342 Mechanical Systems Design II Analytical techniques are presented for the design and analysis of a variety of mechanical components including fasteners, welded joints, springs, bearings, clutches and brakes, shafts, and gears. Materials selection considerations included. Lubrication principles are introduced through bearing analysis. Prerequisite: minimum grade of 1.7 in B ME 341. Offered: SpS. J. Bridge, W. Yoon (4)

B ME 343 Mechanical Systems Design III Covers dynamic system modeling (mechanical, electrical, fluid, and thermos systems); linear oscillator analysis (Laplace transforms, Fourier transforms, eigenvalue problems, and modal analysis); performance specifications of feedback control systems; and controller designs for single input single output systems. Includes laboratory experiences.

Prerequisite: minimum grade of 1.7 in both B ME 342 and B ME 315. W. YOON (5)

B ME 345 Machining Fundamentals Introduction to the principles and operations of metal removal processes emphasizing drilling, milling, lathe, sawing, and grinding processes. B ME 331 may be taken concurrently. (4)

B ME 410 Electric Power and Machinery Fundamentals of electrical circuits and components, and their application in motors, generators, and other machinery used in industrial applications. Includes laboratory. Prerequisite: minimum grade of 1.7 in both STMATH 126 and B PHYS 122. Offered: A. S. COLLINS (5)

B ME 431 Acoustical Engineering: Fundamentals Covers underlying physics of diagnostic and therapeutic ultrasound systems and their physical effects. Estimates important ultrasound parameters using numerical simulations, algebraic techniques, and laboratory-based measurements. Prerequisite: minimum grade of 2.0 in both B ENGR 310 and B PHYS 123. (4)

B ME 432 Acoustical Engineering: Medical Devices Analysis of advanced applications of diagnostic and therapeutic ultrasound systems to rain and to peripheral tissue. Algebraic estimation of physical forces exerted by ultrasound and of associated biological responses. Literature review of ultrasound application to brain and peripheral tissue. (4)

B ME 433 Advanced Thermal Fluids Explores advanced topics in thermodynamics, heat transfer, and fluid mechanics, including but not limited to HVAC, combustion, compressible fluid mechanics, advanced power generation, computational methods, and renewable energy. Prerequisite: Prerequisites: Minimum grade of 2.0 in B ME 333; recommended: B ME 333 (4)

B ME 450 Introduction to Ocean Engineering and Sciences Introduction to fundamental concepts of ocean sciences and engineering through project-based activities. Topics include Hydrostatistics, Hydrodynamics, Ocean Sensors, Underwater Acoustics, Sonar, Marine Geology, Ocean Vehicles, Marine Ecosystem, Marine Mammals, Energy, Pollution and Policy. Prerequisite: Minimum grade of 2.0 in B ENGR 310 S. Hossein Abadi (4) NW

B ME 481 Engineering Professional Development I: The Citizen Engineer Examines the responsibilities of the engineer in the ethical application of technology in diverse, interconnected, and global societies. Historical and contemporary cases are used to probe socio-cultural implications of engineering practice and the role of engineers in local, national, and global development. Prerequisite: minimum grade of 2.0 in both STMATH 126 and B PHYS 121. S. COLLINS (5) I&S, DIV

B ME 482 Professional Engineer Topics in the professional practice of engineering, including engineering economics; product development; project planning; leadership; management and organization; and legal and regulatory matters. Incorporates review for the Fundamentals of Engineering (FE) exam required as the first step toward professional licensure. Prerequisite: minimum grade of 1.7 in B ME 481. S. COLLINS (5) I&S

B ME 493 Advanced Special Topics in Mechanical Engineering Explores special topics in mechanical engineering. (1-5, max. 15)

B ME 495 Capstone Project in Mechanical Engineering I Small-team project targeting open-ended design problems in mechanical engineering. May be undertaken as part of an industrial internship with direct supervision of the mechanical engineering faculty and sponsor. Prerequisite: minimum grade of .7 in each of B ME 333; B ME 343; and B EE 371/CSS 371. P. MOURAD (2)

B ME 496 Capstone Project in Mechanical Engineering II Small-team project targeting the building phase of open-ended design problems in Mechanical Engineering. May be undertaken as part of an industrial internship with direct supervision of the ME faculty and sponsor. May involve students of

complementary disciplines. Prerequisite: B ME 495 and minimum cumulative GPA of 2.0. Offered: Sp. P. MOURAD (3)

B ME 498 Independent Study in Mechanical Engineering Independent study on a topic or area agreed upon by the instructor and the student. (1-5, max. 10)

B ME 499 Undergraduate Research in Mechanical Engineering Undergraduate research on a topic or area agreed upon by the instructor and the student. (1-5, max. 10)

Physics

B PHYS 101 Introduction to Astronomy Conceptual introduction to the science of astronomy. Studies the planets, solar systems, stars, and galaxies from a conceptual, non-mathematical, standpoint. (5) NW, QSR

B PHYS 114 General Physics Basic principles of physics presented without use of calculus. Suitable for students majoring in technically oriented fields other than engineering or the physical sciences. Mechanics. (4) NW, QSR

B PHYS 115 General Physics Basic principles of physics presented without use of calculus. Suitable for students majoring in technically oriented fields other than engineering or the physical sciences. Heat and electromagnetism. Prerequisite: B PHYS 114. (4) NW

B PHYS 116 General Physics Basic principles of physics presented without use of calculus. Suitable for students majoring in technically oriented fields other than engineering or the physical sciences. Sound, light, and modern physics. Prerequisite: B PHYS 115. (4) NW

B PHYS 117 General Physics Laboratory Mechanics laboratory. Prerequisite: B PHYS 114 which may be taken concurrently. Credit/no-credit only. (1) NW

B PHYS 118 General Physics Laboratory Heat and electromagnetism laboratory. Prerequisite: B PHYS 115 which may be taken concurrently. Credit/no-credit only. (1) NW

B PHYS 119 General Physics Laboratory Sound, light, and modern physics laboratory. Prerequisite: B PHYS 116, which may be taken concurrently. Credit/no-credit only. (1) NW

B PHYS 121 Mechanics Basic principles of mechanics and experiments in mechanics for physical science and engineering majors. Lecture tutorial and lab components must all be taken to receive credit. Credit is not given for B PHYS 114 and B PHYS 121. Prerequisite: STMATH 124, which may be taken concurrently. (5) NW, QSR

B PHYS 122 Electromagnetism and Oscillatory Motion Basic principles of electromagnetism, the mechanics of oscillatory motion, and experiments in these topics for physical science and engineering majors. Lecture tutorial and lab components must all be taken to receive credit. Credit is not given for both B PHYS 115 and B PHYS 122 Prerequisite: STMATH 125, which may be taken concurrently; B PHYS 121. (5) NW

B PHYS 123 Waves Electromagnetic waves, optics, waves in matter, and experiments in these topics for physical science and engineering majors. Lecture tutorial and lab components must all be taken to receive credit. Credit is not given for both B PHYS 116 and B PHYS 123. Prerequisite: B PHYS 122. (5) NW

B PHYS 221 Classical Mechanics Covers Newtonian dynamics, planetary orbits, drag forces, energy, oscillators, chaos theory, and more. Some emphasis placed on Lagrangian and Hamiltonian dynamics. Prerequisite: B PHYS 123; STMATH 307; STMATH 308. (5) NW, QSR

B PHYS 222 Modern Physics Provides an introduction to the theories of relativity and quantum mechanics. Covers topics such as atomic physics, solid state/condensed matter physics, and nuclear physics. Prerequisite: minimum grade of 2.0 in both B PHYS 123 and STMATH 307. (5) NW, QSR

B PHYS 224 Thermal Physics Studies heat, temperature, and forms of thermal energy. Covers the laws of thermodynamics and some statistical mechanics. Prerequisite: minimum grade of 2.0 in B PHYS 123. (5) NW, QSR

B PHYS 231 Introduction to Experimental Physics Covers data acquisition and analysis, and presentation of results. Accomplished through experiments in physics. Prerequisite: minimum grade of 2.0 in B PHYS 123. (3)

B PHYS 293 Special Topics in Physics Explores selected topics in Physics at the sophomore level, and will be an elective in physics major. (1-5, max. 15) NW, QSR

B PHYS 305 The Cosmos Provides a conceptual introduction to the foundations and current theories of cosmology. Studies black holes, time travel, the Big Bang, and dark matter. (5) NW, QSR

B PHYS 311 Introduction to Astrophysics I Introduces astronomy and astrophysics using mathematics. First in a series of courses of two. Topics include the basics of celestial motion, telescopes, and stars. Prerequisite: minimum grade of 2.0 in B PHYS 123. (5)

B PHYS 312 Introduction to Astrophysics II Introduces astronomy and astrophysics using mathematics. Second in a series of two. Topics include the basics of galaxy structure, formation, and evolution. Prerequisite: minimum grade of 2.0 in B PHYS 311. (5)

B PHYS 314 Introduction to Cosmology Provides introduction to the science of cosmology. Topics include mathematical descriptions of the expanding universe, the big bang, the cosmic microwave background, and early universe. Prerequisite: minimum grade of 2.0 in both B PHYS 221 and B PHYS 222. (5)

B PHYS 317 Mathematical Physics Introduction to mathematical physics, to include vector calculus, differential equations, complex analysis, Fourier analysis, and calculus of variations. Prerequisite: minimum of 2.0 in BPHYS 123 or PHYS 123, and STMATH 307 or MATH 307, and STMATH 308 or MATH 308. (5) QSR

B PHYS 321 Electricity and Magnetism I Covers electrostatics, including Gauss' law, the electric field, electric potential, conductors, and dielectric media. The first course in a three-quarter sequence covering electromagnetic theory. Prerequisite: minimum grade of 2.0 in either STMATH 324 or MATH 324. (5) NW

B PHYS 322 Electricity and Magnetism II Covers magnetostatics, vector potentials, Maxwell's equations, magnetic materials, tensors, and electromagnetic waves. Second in a three quarter sequence. Prerequisite: minimum grade of 2.0 in either B PHYS 321 or PHYS 321. (5)

B PHYS 323 Electricity and Magnetism III Covers electrodynamics, electromagnetic waves, radiation, and special relativity. Prerequisite: Either B PHYS 322 or PHYS 322. (5) NW, QSR

B PHYS 324 Quantum Mechanics I Introduction to nonrelativistic quantum theory. Covers the postulates of quantum mechanics, Schrodinger wave equations, the Uncertainty Principle, angular momentum, and the hydrogen atom. First part of a two-quarter sequence. Prerequisite: minimum grade of 2.0 in B PHYS 222; minimum grade of 2.0 in either STMATH 324 or MATH 324. (5) NW

B PHYS 325 Quantum Mechanics II Covers nonrelativistic quantum theory. Topics include identical particles, approximation techniques, and scattering problems. Prerequisite: minimum 2.0 in BPHYS 324. (5) NW, QSR

B PHYS 328 Statistical Physics Covers statistical mechanics and quantum statistics. Prerequisite: Minimum 2.0 in B PHYS 224; either B PHYS 324 or PHYS 324, which may be taken concurrently. (5) NW, QSR

B PHYS 431 Experimental Physics Lab I Covers modern experiments in physics, to include digital and analog circuits. First of three part sequence.

Prerequisite: Minimum 2.0 in B PHYS 231. (5) NW, QSR

B PHYS 432 Experimental Physics: Instrumentation Design experiments to measure physical properties using specialized instrumentation and equipment. Second of three quarters. Prerequisite: Minimum 2.0 in B PHYS 431 (5)

B PHYS 433 Experimental Physics: Senior Project Students will be creating deliverable projects and communicating the outcomes and results of their project at end of quarter. Students may propose projects either related to ongoing research or connected to prior coursework in physics. Prerequisite: minimum grade of 2.0 in B PHYS 431. (5)

B PHYS 441 Condensed Matter Physics I Covers condensed matter physics to include the solid and liquid states, crystals, diffraction, phonons, band theory, semiconductors and superconductors. Prerequisite: B PHYS 324 (5) NW

B PHYS 442 Condensed Matter 2 This is the second course in a series of two courses on Condensed Matter Physics. The objective of this course is to introduce formalisms and simple models on magnetic properties and collective excitations in materials. This course also deals with optical processes in semiconductors, and magnetic resonance, surface physics, nanostructures and amorphous materials. Prerequisite: B PHYS 441; recommended: Strongly recommend prior course work in advanced calculus, quantum mechanics and statistical physics. (5)

B PHYS 450 Computational and Theoretical Modeling in Physics Introduces the concepts and techniques for computational modeling of physical systems. In particular, we will use Matlab or Python to develop computational models, and the course will introduce the Matlab and Python programming languages and cover basic programming methods. We will then model physical systems using differential equations, Fourier transforms, and matrix methods. Prerequisite: B PHYS 317 (5) NW, QSR

B PHYS 484 Physics, Society and Industry Draw connections between physics, mathematics and general science topics and connect these topics to issues relevant in modern day society and industry. Focus on written, verbal and visual communication skills and using literature sources Prerequisite: BPHYS 224 and BPHYS 222 (5) I&S

B PHYS 493 Advanced Topics in Physics Covers advanced topics in Physics. (1-5, max. 15) NW, QSR

B PHYS 494 Physics Seminar Observing and presenting scientific talks. Students will learn about modern physics research and how to present scientific material to an audience. Credit/no-credit only. (1, max. 5)

B PHYS 498 Independent Study in Physics Independent study on a topic or area agreed upon by the instructor and the student. (1-5, max. 10)

B PHYS 499 Undergraduate Research in Physics Undergraduate research on a topic or area agreed upon by the instructor and the student. (1-5, max. 10)

Consciousness

BCONSCI 321 Consciousness Studies Introduces the field of consciousness studies. Explores the interaction of mind and body through scientific studies of dreams, intuition, and intention, and anomalous phenomena. Includes the role of mediation and contemplative practices in physical and psychological well-being. Offered: A. K. NOBLE (5) I&S/NW

BCONSCI 322 Exploration of Consciousness Deep inquiry into the nature of consciousness and the interaction of mind and body. Topics include the biology of compassion and belief, attention and intention in neuroplasticity, experimental studies of meditation and mental training in promoting psychological, physical health; and the emergence of an integral scientific paradigm. Prerequisite: BCONSC 321. Offered: W. K. NOBLE (5) I&S/NW

BCONSCI 323 Psychology and Science of Dreams Explores the psychology and science of dreams. Topics include the history and theories of dreams, modern experimental studies of dreaming and dream content, lucid dreams, contribution of dreams to scientific creativity, and dream incubation and interpretation techniques. Offered: Sp. K. NOBLE (5) I&S/NW

BCONSCI 325 Mind and Matter Explores the relationship between mental and physical events in the constitution and representation of reality. Integrates perspectives from philosophy of mind and modern physics to build insight into the relationship between matter and mind; the nature of consciousness, and possibilities for free will. Prerequisite: BCONSC 321 Offered: Sp. S. COLLINS (5) I&S/NW

BCONSCI 424 Consciousness and the Natural World Explores emerging models of consciousness in the natural world. Topics include scientific and shamanic research about animal and plant consciousness and the ethical implications of this inquiry for human interaction with other species. Prerequisite: BCONSC 322. Offered: Sp. K. NOBLE (5) I&S/NW

BCONSCI 425 Consciousness and Well-Being Focuses on understanding the non-local dynamics of human consciousness. Topics include entanglement and attunement as underlying principles of psychological and physical reality; experimental and phenomenological studies of shared consciousness with humans and other species; and contemplative practices that promote individual and societal health and well0being. Prerequisite: BCONSC 322. K. NOBLE (5) I&S/NW

Science and Technology

BST 110 Chemistry and Life Survey course exploring the chemistry of life. Topics include the molecular nature of all life, chemical processes of living organisms, chemistry of food, air, water, nutrition, pollution, genetic engineering, and drug design. Material includes basic chemical principles related to explored topics. No prior chemistry knowledge assumed. Offered: jointly with B CHEM 110; A. (5) NW

BST 153 Introduction to Geology Survey of the physical systems that give the earth its form. Emphasizes the dynamic nature of interior and surface processes on the earth and stressing the value of geological forms in understanding of the past and predicting future events. Offered: jointly with BIS 153; WSp. (5) NW

BST 154 Introduction to Oceanography Case studies of research on the oceans, deep-sea exploration, climate change, and human impacts on marine life. Considers societal factors affecting progress in marine science, changing popular attitudes toward the oceans, and key current policy implications of marine science. Offered: jointly with BIS 154; AWSp. (5) NW

BST 200 Introduction to Climate Science Introduces climate science and global climate change. Topics include the scientific method, earth history, global biogeochemical cycles, population and energy consumption, and greenhouse gas emissions; fundamental climate science, energy conservation, alternative energy; climate and the media; and climate policy. Includes service project around issues of energy or climate. Offered: jointly with B CLIM 200. (5) I&S/NW

BST 205 Women in STEM Many women feel outside of science, technology, engineering, and mathematics (STEM) fields and continue to be underrepresented in these fields. This class explores challenges experienced by diverse women in STEM fields, and multiple strategies to surmount those challenges. Upon completion of the course, students will have acquired tools needed to persevere and succeed as they pursue a career in the STEM fields. (3) I&S, DIV

BST 293 Special Topics Examines different subjects or problems from an interdisciplinary framework. (5, max. 15)

BST 301 Scientific Writing Develop written and verbal scientific communication skills that are essential for success in a scientific career. Create multiple products including a scientific paper, research funding proposal, and content for online media. Prerequisite: Minimum 2.0 grade in B WRIT 134. Offered: AWSp. H. GALINDO (5)

BST 381 Introduction to Electric Power Generation Reviews the design and operation of power plants for the generation of electric power. Covers thermodynamic principles of energy conversion, cycle analysis, combustion, nuclear and hydroelectric power, emerging energy technologies, plant economics, emission controls, and environmental impact. Prerequisite: STMATH 126 or MATH 126; and B PHYS 122. Offered: jointly with B EE 381. (5) NW, QSR

BST 445 Political Economy of Energy Covers the theoretical and practical issues in developing public policy to meet demands for efficient, secure, and environmentally sustainable energy. Student evaluate energy technologies in terms of scientific merit, economics, environmental impacts, and political contexts, and propose technologically sound and politically feasible solutions. (5) I&S

BST 446 Sustainable Energy Covers the principles of energy conservation and technologies for generating and transmitting energy sustainably to meet growing energy demand. Discusses the status and prospects of current and emerging energy choices, including fossil and nuclear fuels, biomass, wind, and solar. Prerequisite: B CUSP 124; either B CHEM 142, B PHYS 114, or B PHYS 121. Instructors: Collins (5) NW

BST 493 Advanced Topics in Science and Technology Explores selected advanced topics in science and technology. (2-5, max. 15)

BST 498 Independent Study in Science and Technology Independent study on a topic or area agreed upon by the instructor and student. (1-5, max. 15)

BST 499 Undergraduate Research in Science and Technology Undergraduate research on a topic agreed upon by the instructor and student. (1-5, max. 20)

Computing and Software Systems

CSS 101 Digital Thinking Introduces the fundamental concepts behind computing and computational thinking including logical reasoning; problem solving, data representation; abstraction; complexity management; computers and network operations; effective web searches; ethics; and legal and social aspects of information technology through the creation of popular digital artifacts such as web pages, animations, and video games. Offered: jointly with BIS 111; AWSp. (5) QSR

CSS 107 Introduction to Programming through Animated Storytelling Introduces the fundamentals of programming using storytelling in virtual worlds; includes creation of characters, games, short stories, storyboards, 3-D motion, classes, methods, and functions. Contemporary topics vary addressing social, scientific, and ethical issues of information technology. (5) VLPA, QSR

CSS 110 Introduction to Cyber Security Introduces cyber security topics including hacking, social networking, privacy, cryptography, legal aspects, social implications, password management, digital forensics, computer networking, wireless security, and ethical issues. Focuses on various methods and techniques to address cyber security threats. No technical experience needed. (5) I&S

CSS 132 Computer Programming for Engineers I Introduces programming concepts within social, mathematical, and technological context. Topics include programming fundamentals (control structures, data types, functions, etc.), computer organization, algorithmic thinking, introductory software engineering concepts, and social and professional issues. Engineering applications are emphasized. A computer language used in

engineering practice is used for instruction. Co-requisite: CSSSKL 132. (5) NW, QSR

CSS 133 Computer Programming for Engineers II Transition from basic programming skills to a rigorous process of software development. Familiarization wit higher level programming techniques (recursion, generic programming, stacks, queues, trees, searching, and sorting). Emphasizes connection between algorithmic thought and implementation. Engineering applications are emphasized. Prerequisite: minimum grade of 2.7 in CSS 132; CSSSKL 133 is a co-requisite; recommended: (5) NW, QSR

CSS 142 Computer Programming I Introduces programming concepts within social, cultural, scientific, mathematical, and technological context. Topics include programming fundamentals (control structures, data types and representation, operations, functions and parameters), computer organization, algorithmic thinking, introductory software engineering concepts (specifications, design, testing), and social and professional issues. Co-requisite: CSSSKL 142. (5) NW, QSR

CSS 143 Computer Programming II Transition from basic programming skills to a rigorous process of software development. Familiarization with higher level programming techniques (recursion, generic programming, stacks, queues, trees, searching, and sorting). Emphasizes connection between algorithmic thought and implementation. Prerequisite: minimum grade of 2.7 in CSS 161, CSS 142, or CSE 142. Co-requisite: CSSSKL 143. (5) NW, QSR

CSS 173 Fundamentals of Programming Theory and Applications Fundamental concepts and techniques for analysis, design and implementation of computer programming. Prerequisite: CSS 142; may not be repeated. (5)

CSS 198 Supervised Study Supervised exploration of computing-related topic or concept. (1-5, max. 6)

CSS 199 Computing Research Exploration of computing research activities and processes as specified in a contract with a faculty member. (1-5, max. 6)

CSS 205 Women in STEM Seminar: College Life Develop effective academic strategies for women in science, technology, engineering and mathematics. Explores the representation of women in STEM as they are portrayed in literature and film. Discusses issues if STEM and gender including: mentors and support groups, social issues, role models and stereotyping, and earning respect. Credit/no-credit only. (1, max. 6) I&S, DIV

CSS 211 Computers and Society Exploration and discussion of issues related to the development, support, and usage of computing technology in today's society. Topics vary each quarter but may include coverage of areas such as intellectual property rights, cybersecurity, privacy, freedom of speech, liability, ethics, social justice, diversity, and labor. (5) I&S

CSS 225 Physics and Chemistry of Computer Components and Their Manufacture Examination of the basic physics and chemistry underlying the design and manufacture of computer components. Introduction to the electronic structure of the solid state, the nature of p-n junctions, and basic transistor design. Aspects of materials and polymer science and photolithography employed in microchip manufacture. May not be repeated. Jackels (5) QSR

CSS 290 Topics in Computing Examines current topics and issues associated with computing that are of broad relevance. (1-5, max. 10)

CSS 295 K-12 Computing Education Collaboration with community partners to develop computing education opportunities for K-12 students. Curriculum development and basic computing education environments. Prerequisite: Either CSS 143, which may be taken concurrently, or a minimum grade of 3.0 in CSS 142. Credit/no-credit only. (2) QSR, DIV

CSS 301 Technical Writing for Computing Professionals Explores the most effective methods of communication based on the common expectations for computing and other engineering professionals. Examines various writing patterns commonly used in technical writing, including compare/contrast, persuasive, process, instructions, and problem/solution, and when/why is used. Prerequisite: either ENGL 182, HCDE 231, or B CUSP 135. (5)

CSS 305 Survey of Computer Systems for Teachers Survey of computer systems concepts to provide context and understanding for teachers creating K-12 courseware. Includes issues, tradeoffs, and solutions of computer systems, including data structures, networks, databases, human computer interactions, software engineering, and cybersecurity. Non-CSS majors only. Prerequisite: minimum grade of 2.7 in CSS 161; minimum grade of 2.0 in CSS 211. Credit/no-credit only. (5) QSR

CSS 310 Information Assurance and Cyber Security Provides theoretical and practical introduction to information assurance and cyber security (IAC). Includes methods and practices for securing information and information systems. Covers how vulnerabilities arise, recognizing evolving threats, and mitigating them. Explores the role of risk analysis, information privacy, accountability, and policy. (5)

CSS 330 Topics in Mathematics for Software Development Topics in intermediate mathematics as applied within the context of computer software application development. Topics chosen from the fields of intermediate calculus and finite mathematics. (1-5, max. 10)

CSS 332 Programming Issues with Object-Oriented Languages Covers language and development/execution environment differences, including data types, control structures, arrays, and I/O; addressing and memory management issues including pointers, references, functions, and their passing conventions; object-oriented design specifics related to structured data and classes. Co-requisite: CSS 342 Credit/no-credit only. Zander (2)

CSS 337 Secure Systems Prepares students for deploying and operating secure systems on a heterogeneous distributed infrastructure. Covers cybersecurity principles, methods, and tools used to protect against and detect external and internal threats. Addresses ethical and professional issues for cybersecurity personnel. Assumes students have basic computer administration skills. Prerequisite: either CSS 142, CSE 142, or CSS 161; and CSS 310. (5)

CSS 340 Applied Algorithmics Extends the principles of programming and discrete math (e.g., programming languages, recursion, sorting, computational complexity, mathematical induction, logic concepts, set theory, hash tables, etc.) and applies them to the development, analysis, and implementation of data structures and efficient software. Prerequisite: minimum grade of 2.5 in either CSS 162 or CSS 143; and minimum grade of 2.5 in either STMATH 124 or MATH 124. (5)

CSS 342 Data Structures, Algorithms, and Discrete Mathematics I Integrating mathematical principles with detailed instruction in computer programming. Explores mathematical reasoning and discrete structures through object-oriented programming. Includes algorithm analysis, basic abstract data types, and data structures. Prerequisite: minimum grade of 2.8 in CSS 143; minimum grade of 2.5 in STMATH 125; may not be repeated. (5)

CSS 343 Data Structures, Algorithms, and Discrete Mathematics II Develops competencies associated with problem-solving, algorithms, and computational models. Covers abstract data types and data structures, efficiency of algorithms, binary tree representations and traversals, searching, dictionaries, priority queues, hashing, directed graphs and graph algorithms, and language grammars. Prerequisite: minimum grade of 2.0 in CSS 301; minimum grade of 2.0 in CSS 342; minimum grade of 2.0 in either STMATH 125 or MATH 125. (5)

CSS 350 Management Principles for Computing Professionals Through a team software project, explores critical interpersonal, communication, leadership, decision-making, social, and cultural theories drawn from contemporary research in anthropology, sociology, psychology, and business. Prerequisite: CSS 301, which may be taken concurrently; may not be repeated. Erdly (5)

CSS 360 Software Engineering Surveys the software engineering processes, tools, and techniques used in software development and quality assurance. Topics include life-cycle models, process modeling, requirements analysis and specification techniques, quality assurance techniques, verification and validation, testing, project planning, and management. Prerequisite: CSS 133, CSS143, CSS 162, or CSS 173 (5)

CSS 370 Analysis and Design Methods and tools to capture and communicate requirements, proposed solutions, and design to management, customers, and software developers. Data, process, and object modeling using languages such as data flow diagrams, entity/relationship diagrams, and unified modeling language use cases and class and sequence diagrams. Prerequisite: Prerequisite: 2.0 in CSS 301; 2.0 in CSS 342 or CSS 340; 2.0 in CSS 360; may not be repeated. (5)

CSS 371 The Business of Technology Methods for aiding software development, communicating progress to customers/management, and developing marketing strategies for the product. Incorporates social, psychological, and ethical issues. May not be repeated. Offered: jointly with B EE 371. Berger (5)

CSS 383 Bioinformatics Covers principles of bioinformatics. Students develop a working knowledge of computational tools to analyze biological datasets, including DNA and protein sequence databases. Includes topics such as: database searching, sequence alignment (DNA, RNA, and protein), BLAST, phylogeny, evolution, functional genomics, gene expression/microarray analysis, and protein analysis. Offered: jointly with B BIO 383. Kraemer (5) NW

CSS 385 Introduction to Game Development Examines the fundamental issues in designing and developing computer video games; creative and artistic elements, story narration, software architecture, interaction model, mathematic, physics, special effects, and in-game AI logic. Experiences elements in game design: world setting, game play, and interface; and experiences implementing games: conceptualization, prototyping, and play testing. Prerequisite: STMATH 125 or MATH 125; and CSS 340 or CSS 342. Offered: Sp. Sung (5) VLPA/NW

CSS 390 Special Topics Examines current topics and issues associated with computing and software systems. (1-5, max. 10)

CSS 397 Computing Internship Elective internship project as delineated in a contract between student, faculty advisor, and community sponsor. Prerequisite: CSS 301; CSS 360; and either CSS 340 or CSS 342 Credit/no-credit only. Offered: AWSpS. (1-5, max. 5)

CSS 405 Women in STEM Seminar: Career/Professional Life Develops effective academic strategies for women in science, technology, engineering and mathematics. Explores the representation of women in STEM as they are portrayed in literature and film. Discusses issues of STEM and gender including: earning respect, work-life balance, social issues, connection and networks, job hunting and technical interviews. Credit/no-credit only. (1, max. 6) I&S, DIV

CSS 411 Computing Technology and Public Policy In depth investigation of economical, political, organizational, and societal ramifications of using computing technology. Evaluates current policy approaches, determines trends, and proposes changes. Topics vary by quarter. (5) I&S

CSS 415 Emerging Topics in Information Assurance and Cybersecurity Explores emerging topics and

unique subjects in information assurance and cybersecurity (IAC) not otherwise covered in the IAC curriculum. Prerequisite: either CSS 310, INFO 310, or T INFO 310. (1-5, max. 15)

CSS 421 Introduction to Hardware and Operating Systems An introduction to the architecture of modern microprocessors and operating systems. Examines the basic theories and concepts of how hardware and software cooperatively interact to accomplish real-world tasks. Prerequisite: CSS 342, or CSS 340. (5) NW

CSS 422 Hardware and Computer Organization An introduction to the architecture, operation, and organization of a modern computing machine. Topics covered include basic logic operations, state-machines, register models, memory organization, peripherals, and system issues. Assembly language taught in order to understand the instruction set architecture and memory model of the computer. Prerequisite: CSS 342; may not be repeated. Instructors: Berger (5)

CSS 427 Introduction to Embedded Systems Introduction to the process of specifying and designing embedded systems. Follows the embedded systems development; software and hardware partitioning, processor selection, real-time operating systems, coding in assembly language and C, debugging, and testing. Lab experiments reinforce fundamental concepts using embedded design and debug tools. Prerequisite: B EE 425 or CSS 422. (5)

CSS 430 Operating Systems Principles of operating systems, including process management, memory management, auxiliary storage management, and resource allocation. Focus on the structure of the popular desktop and real-time operating systems. Prerequisite: minimum grade of 2.0 in CSS 343; may not be repeated. (5)

CSS 432 Computer Networking Examines computer networking topics such as data link networks, packet switching, routing, TCP/UDP, flow control, congestion control, network security, and application protocols. Oriented toward network programming and performance evaluation experiments. Prerequisite: minimum grade of 2.0 in CSS 343; recommended: CSS 430. (5)

CSS 434 Parallel and Distributed Computing Concepts and design of parallel and distributed computing systems. Topics include: fundamentals of OS, network and MP systems; message passing; remote procedure calls; process migration and mobile agents; distributed synchronization; distributed shared memory; distributed file system; fault tolerance; and grid computing. Prerequisite: CSS 343. Fukuda (5)

CSS 448 Introduction to Compilers Introduction to the structures and organization of programming languages; fundamentals of translation; regular expressions and context-free grammars; syntax and lexical analysis, symbol tables, semantics and parsing, code generation; translation techniques such as LR, LL, and recursive descent. Prerequisite: CSS 343; may not be repeated. Zander (5)

CSS 450 Computer Graphics Introduces the fundamental concepts in computer graphics: camera model, illumination models, hardware shading, transformation pipeline, scene graphs, texture mapping, and simple modeling and animation techniques. Prerequisite: minimum grade of 2.0 in CSS 342; may not be repeated. (5)

CSS 451 3-D Computer Graphics Introduces practical and popular three-dimensional (3-D) graphic algorithms. Examines modeling (how to build 3-D objects), animation (how to describe the motion of objects), and rendering (how to generate images of 3-D objects in animation). Prerequisite: CSS 342; and STMATH 125 or MATH 125 Sung (5)

CSS 452 Game Engine Development Studies the technical fundamentals and implementation details of a game engine. Topics include software architecture, input, resource management, textures, animation, coordinate systems, object behaviors and interactions, camera manipulations, illumination and

special effects, physics, and scene management Prerequisite: minimum grade of 2.0 in CSS 343; minimum grade of 2.0 in CSS 360; and minimum grade of 2.0 in either STMATH 125 or MATH 125. (5)

CSS 455 Introduction to Computational Science and Scientific Programming Introduction to principles and fundamental algorithms of scientific computing, including applied linear algebra and numerical methods. Group projects address current computational problems in the physical, biological, and life sciences. Prerequisite: STMATH 125 or MATH 125; and CSS 143 or CSS 173 (5)

CSS 457 Multimedia and Signal Computing How multimedia information is captured, represented, processed, communicated, and stored in computers. Topics include: physical properties of sound and images, digitization, digital signal processing, filtering, compression, JPEG and MPEG algorithms, and storage and network communication. Prerequisite: CSS 342, or CSS 340; may not be repeated. M. Stiber (5)

CSS 458 Fundamentals of Computer Simulation Theory and Application Covers all aspects of computer simulation including theory, implementation, and application. Presents real-life interdisciplinary examples. Final student project models a real-life situation with a computer simulation. Prerequisite: CSS 340 or CSS 342 (5)

CSS 461 Software Project Management Fundamental skills required for effective software project management, including project planning and tracking and people management. Topics include risk analysis, project scope, scheduling, resource allocation, cost estimation, negotiation, monitoring and controlling schedule, software metrics, quality management, process improvement, staffing, leadership, motivation, and team building. Prerequisite: CSS 360, may not be repeated. (5)

CSS 473 Entrepreneurship Seminar Creates or works within a new venture. New venture situations include for-profit and non-profit companies and launching new products/services within existing companies. Develops a business plan. Offered: jointly with B BUS 443. (5)

CSS 474 Product Development Lab Includes a technology project and product development within the dynamic of time-pressured competition. Focuses on systematically improving products to beat competition and win the customer. Topics include benchmarking, competitive intelligence, and managing small group product development. Offered: jointly with B BUS 444. (5)

CSS 475 Database Systems Methods for obtaining requirements and designing database systems; differences between hierarchical, relational, and network database designs; techniques for designing and coding effective reporting procedures. Prerequisite: CSS 360 or B IMD 351 (5)

CSS 478 Usability and User-Centered Design Application of human information processing models, theories and human-computer interaction principles for designing interactive systems. Emphasis is on how usability methods could be incorporated into the system design lifecycle. Topics include user survey, heuristic evaluation, task analysis and experimental testing. Prerequisite: CSS 360; may not be repeated. (5)

CSS 480 Principles of Human-Computer Interaction Examines fundamentals of human perception, human cognition, attention and memory constraints; role of user experience and intelligence; input and output devices; standards compliance; design of systems for individual versus collaborative work settings; rapid prototyping, user-centered design techniques, and design evaluation methods. Prerequisite: CSS 360; may not be repeated. Instructors: Erdly (5)

CSS 481 Web Programming and Applications Examines the core web development technologies used to design, build and support web-based applications. Introduce various web programming languages. Creates interactive media projects,

including applying programming constructs, incorporating text and multimedia contents, and using standard web communication formats. Prerequisite: CSS 342 and CSS 475. (5)

CSS 482 Expert Systems Theory and application of expert systems: computer systems that capture and use human expertise. Applications include computer configuration, fault diagnosis, computer-aided instruction, data interpretation, planning and prediction, and process control. Prerequisite: CSS 343; may not be repeated. (5)

CSS 483 Bioinformatics Algorithms Covers basic molecular biology to aid in the understanding of current bioinformatics problems that need computational tools. Explores fundamental bioinformatics algorithms of current and future bioinformatics systems. Students implement algorithms on practical biology problems. Prerequisite: CSS 343, which may be taken concurrently. (5)

CSS 485 Introduction to Artificial Neural Networks Application of biological computing principles to machine problem solving. State of the art in artificial neural networks (ANNs), including vision, motor control, learning, data analysis. Topics include ANN architectures, algorithms: perceptrons, Widrow-Hoff, backpropagation, Hebbian networks. Prerequisite: CSS 343; may not be repeated. Stiber (5)

CSS 487 Computer Vision Methods for extracting content from digital images. Topics typically include linear filters, edge detection, segmentation, stereo vision, motion estimation, and object recognition: Examines applications of computer vision, such as image databases and robot navigation. Prerequisite: CSS 343. Instructors: Olson (5)

CSS 490 Special Topics in Computing and Software Systems Examines current topics and issues associated with computing and software systems. Offered: AWSpS. (1-5, max. 20)

CSS 495 Applied Computing Internship Elective completion of a work project as delineated in a contract between student, faculty advisor, and community sponsor. Prerequisite: CSS 350; CSS 360; CSS 421. Credit/no-credit only. (1-5, max. 10)

CSS 496 Applied Computing Capstone Group seminar project requires software development and research project in applied computing. Objectives include: integrating minor or concentration with computing, reviewing professional literature, writing technical documents, and presenting project results to technologists/end-users. Prerequisite: CSS 301; CSS 340 or CSS 342; CSS 342; CSS 350; CSS 360; CSS 421. (5)

CSS 497 Computer Science and Software Engineering Capstone Completion of project as delineated in a contract between student, faculty advisor, and community sponsor. Prerequisite: CSS 350; CSS 370; CSS 422; CSS 430; two additional CSS courses. ([1-10]-, max. 10)

CSS 498 Independent Study Individual study by arrangement with instructor. (1-5, max. 10)

CSS 499 Undergraduate Research Design and implementation of a research study as specified in a contract with a faculty member. (0-5, max. 10)

CSS 501 Data Structures and Object-Oriented Programming I Covers data structures and object-oriented programming. Studies basic and advanced data types, their uses, and implementations. Students design solutions to programming problems using object-oriented techniques with various data types. Covers algorithms and their tradeoffs. Uses modern software engineering practices. (4)

CSS 502 Data Structures and Object-Oriented Programming II Covers advanced data structures including trees, balanced trees, heaps, graphs, and hash tables along with associated algorithms. Covers object-oriented programming with a focus on design and implementation of problems using inheritance and polymorphism. Introduces formal automata theory. Prerequisite: minimum grade of 2.7 in CSS 501. (4)

CSS 503 Systems Programming Examines the logical design and programming aspects of operating systems and network communication. Topics include processes, threads, synchronization, deadlocks, memory management, virtual memory, file systems, and client-server network programming. Prerequisite: minimum grade of 2.7 in CSS 502. (4)

CSS 506 Software Development Processes Provides a foundation in software engineering processes, methods, and practices associated with prescriptive and agile software process models. Includes the creation of artifacts commonly used to communicate, justify, and manage computing projects. (2)

CSS 507 Software Modeling Techniques Provides the concepts and skills needed to use modeling in software analysis and design to foster understanding and communications of a problem and its potential solutions. Includes the creation of modeling artifacts for projects by hand and using CASE tools. Prerequisite: CSS 506. (2)

CSS 508 Software Testing and Quality Reviews approaches, concepts, and techniques used to validate and verify software and methods used to improve software processes. Students reflect on the applicability of software engineering and computer science methods. Prerequisite: CSS 507. (2)

CSS 514 Security, Policy, Ethics, and the Legal Environment Addresses ethical, legal, and policy frameworks within which information assurance and secure development lifecycle professionals must practice. Covers ethical, moral, legal and policy issues related to computers and telecommunications systems, such as how they impact privacy, fair information practices, equity, content control, and freedom of electronic speech. (2)

CSS 515 Contemporary Issues in Information Assurance Addresses current developments in information assurance and cyber security, such as the changing threat spectrum, legal developments, international relationships, and intellectual property protection with an emphasis on the ethical and moral perspectives. Covers communities and resources important to becoming a responsible professional in the security field. (2)

CSS 517 Information Assurance and the Secure Development Lifecycle Information assurance and cyber security for engineering and operational environments including topics such as: secure development lifecycle; policy development and implementation; professional ethical obligations; applications risk management; security operations; common threats, vulnerabilities, and exploits; confidentiality, integrity, and availability; information lifecycle; privacy considerations; legal and regulatory issues, and governance. (5)

CSS 518 Human Factors in Cyber Security Humans are considered the weakest link in cyber security. Regardless of the robustness of technical solutions, without an understanding and appreciation for the human factors, there will continue to be significant compromises. This course examines the human factors involved in cyber security, including behavioral, psychological, social, technical, and usability components. (5)

CSS 519 Incident Response and Risk Management Risk management and incident response from an information assurance and cyber security perspective, including topics such as: risk management; risk assessments; threat, vulnerability and exploit analysis; risk prioritization; risk mitigation; business impact analysis; business continuity planning; disaster recovery planning; incident response and recovery; compliance; and audits. (5)

CSS 527 Cryptography and Information Assurance Explores the theory and application of cryptography from a computer science perspective. Examines the mathematical background, implementation, and deployment of cryptographic algorithms for symmetric and asymmetric encryption, hashing, and digital signatures. Discusses applications of cryptography to build and deploy secure systems.

Prerequisite: either CSS 517, which may be taken concurrently or permission of instructor. (5)

CSS 533 Distributed Computing Builds on knowledge of advanced programming methodologies in distributed computing. Topics include message passing, indirect communication, remote method invocation, distributed objects, multi-tier server-side programming, peer-to-peer systems, distributed synchronization, distributed check-pointing, and replica management. (5)

CSS 534 Parallel Programming in Grid and Cloud Exploration of theoretical programming methodology and practical middleware design used for parallel programming in grid and cloud systems. Uses different programming models, parallelizing patterns, and middleware systems for designing application-specific fault-tolerant parallel software. (5)

CSS 535 High Performance Computing Covers the essential theories, principles, concepts, and practices related to designing, implementing, evaluating, and using high-performance computing systems. These include ways to reason about issues arising from the use of homogeneous and heterogeneous combinations of memory and computational resources (e.g. CPUs and GPUs), data, algorithms, and application domains. (5)

CSS 537 Network and System Security Examines the theory and practice of network security, the role of cryptography, and the current state of the art in building secure networked systems. Covers topics such as access control, authentication, perimeter security defense, firewalls, virtual private networks, intrusion detection systems, and wireless security and network security auditing tools. (5)

CSS 538 Security in Emerging Wireless and Mobile Networks Examines the security issues associated with various emerging wireless, mobile networks, and pervasive systems. Covers topics such as MAC layer and routing layer security; robust localization; trust and reputation mechanisms; mobile malwares; authentication solutions; and machine learning based intrusion detection techniques. (5)

CSS 539 Cyber Security in Emerging Environments Explores security issues and solutions in emerging environments and non-traditional computing platforms such as vehicular networks, mobile phone systems, and pervasive systems. Also covers topic such as usable security, managing trade-offs in resource-constrained systems, and reasoning with uncertain information. (5)

CSS 545 Mobile Computing Covers concepts related to systems once can build located at the intersections of pocket size computing devices; location aware technologies; mobile web services; and integrated sensors such as touch- and gesture-based UIs. Uses programming projects to explore the concepts and application in each area, and enable students to define a final project to combine and intersect the above areas. (5)

CSS 548 Introduction to Compilers Introduces the structures and organization of programming languages; fundamentals of translation; regular expressions and context-free grammars; syntax lexical analysis, symbol tables, semantics and parsing, code generation; translation techniques such as LR, LL, and recursive descent. Offered: A. Zander (5)

CSS 549 Algorithm Design and Analysis Covers fundamental techniques for algorithm design and analysis, such as computational complexity, greedy algorithms, divide-and-conquer algorithms, dynamic programming, graph algorithms, randomized algorithms, and computational intractability. (5)

CSS 551 Advanced 3D Computer Graphics Examine topics and issues associated with the design and implementation of commercial-scale graphical applications including: system architecture, user interaction models, and issues and algorithms in modeling, animation, and rendering. Prerequisite: Cannot be taken for credit if CSS 451 already taken; recommended: Data Structures, Algorithms, Linear Algebra K. Sung (5)

CSS 552 Topics in Rendering Studies core algorithms and technologies in synthesizing high quality images, including: camera models, 3D viewing, visibility sampling and approximation, light source models, material property approximation, illumination models, human vision system, and texture synthesis. Prerequisite: CSS 451. Instructors: Sung Offered: W. (5)

CSS 553 Software Architecture Studies the concepts, representations techniques, development methods, and tools for structuring software systems. Topics include domain-specific software architectures, architecture description languages, architectural styles, product line architectures, and standards. Combines hands-on experience designing software with an understanding of recent developments in the field. (5)

CSS 555 Evaluating Software Design Studies best software engineering practices and methods used in prescriptive and agile approached to create and evaluate software design from an quality principled point-of-view. Considers design from quality dimensions such as performance, scalability, maintainability, usability, and security. (5)

CSS 565 Research Methods in Software Development In-depth study of research design and data analysis techniques for computing-related research activities. Students prepare a research proposal; examine experimental, quasi-experimental, and qualitative design strategies; perform meta-analytic research, define and collect appropriate software metrics; and perform appropriate advanced statistical analyses. (5)

CSS 566 Software Management Covers theories, principles, and practices that are designed to enable project managers and other related stakeholders as they assess, choose, and use appropriate frameworks, tools, techniques, and metrics to guide software projects toward successful completion or termination. (5)

CSS 572 Evidence-Based Design Provides a foundation in evidence-based user-centered design theory, methods, and practices for creating innovative software-enabled products. (5)

CSS 577 Secure Software Development Examines secure design and secure coding principles, practices, and methods including least privilege, threat modeling, and static analysis. Covers common vulnerabilities such as buffer overruns, integer overflows, injection attacks, cross-site scripting, and weak error handling in detail. (5)

CSS 578 Ethical Penetration Testing Explores ethical hacking and penetration testing tools, vulnerability analysis and exploitation, and defense techniques. Covers topics such as reconnaissance, OS fingerprinting, remote network mapping, web application, software and network vulnerabilities, attack surface analysis, fuzz testing, exploitation of vulnerabilities, credential gathering, and privilege escalation. (5)

CSS 579 Malware and Attack Reverse Engineering Explores techniques and technologies for understanding the operation of malicious software and attacks. Discusses and explores techniques for detection, identification and prevention. Presents reverse engineering of code and network exploits as a method for understanding and development of countermeasures. (5)

CSS 581 Machine Learning Theory and practical use of machine learning techniques, such as decision trees, logistic regression, discriminant analysis, neural networks, naive Bayes, k-nearest neighbor, support vector machines, collaborative filtering, clustering, and ensembles. Emphasizes hands-on experience with real-world datasets, combined with several programming projects. (5)

CSS 583 Knowledge Management Systems Explores contemporary theoretical and practical implications of how to create and manage knowledge as acquired using technology. Uses different strategies such as XML, RDF, RDFS, and other approaches to provide

methods and structures to organize and reference data for use within a variety of knowledge domains. (5)

CSS 584 Multimedia Database Systems Discusses core concepts for multimedia data representation and compression. Introduces state-of-the-art techniques for multimedia data processing; compression, indexing and retrieval. Examines various multimedia systems; tools and applications. (5)

CSS 587 Advanced Topics in Computer Vision Covers advanced topics in computer vision. Includes image and video databases, object recognition, video processing, scene reconstruction, and robot vision. Students implement projects on current topics in computer vision research. (5)

CSS 590 Special Topics in Computing Special topics in computer science and software engineering. Prerequisite: permission of instructor. (5, max. 15)

CSS 593 Cyber Security Engineering Capstone Students apply their knowledge and skills related to cyber security engineering in a culminated capstone project. Prerequisite: minimum grade of 2.7 in each of CSS 514, CSS 517, CSS 519, CSS 527, CSS 537, CSS 577, and CSS 578. ([1-5]-, max. 10)

CSS 595 Computer Science and Software Engineering Capstone Students apply their knowledge and skills related to computer science and software engineering in a culminating capstone project. Credit/no-credit only. ([1-10]-, max. 40)

CSS 599 Faculty Research Seminar Weekly seminars on current research topics in computer science, software engineering, or cyber security engineering. (1)

CSS 600 Independent Study or Research Independent study or research on computing topics conducted under the direction of one or more instructors. Offered: AWSpS. (1-10, max. 30)

CSS 601 INTERNSHIP Graduate internship under the supervision of a CSS faulty member. (1-5, max. 10)

CSS 700 Master's Thesis (*-)

Computing and Software Systems Skills

CSSSKL 132 Computer Programming for Engineers Skills I Strengthens computer programming and problem-solving skills through critical thinking and programming practice. Engineering applications are emphasized. Co-requisite CSS 132. Credit/no-credit only. (1)

CSSSKL 133 Computer Programming for Engineers Skills II Strengthens computer programming and problem-solving skills through critical thinking and programming practice. Engineering applications are emphasized. Co-requisite: CSS 133 Prerequisite: Minimum grade of 2.7 in CSS 132. Credit/no-credit only. (1) QSR

CSSSKL 142 Computer Programming Skills I Strengthens computer programming and problem-solving skills through critical thinking and programming practice. Co-requisite: CSS 142. Credit/no-credit only. (1)

CSSSKL 143 Computer Programming Skills II Strengthens computer programming and problem-solving skills through critical thinking and programming practice. Prerequisite: minimum grade of 2.7 in CSS 161 or CSS 142. Co-requisite: CSS 162. Credit/no-credit only. (1) QSR

CSSSKL 509 Technical Writing Skills Focuses on critical technical writing skills including formulating arguments and technical use and portrayal of data in reports and oral presentations. Credit/no-credit only. (2, max. 6)

CSSSKL 510 Scientific Writing Explores how to locate, analyze, and synthesize professional literature on a topic and how to assemble the resources necessary to write an review of that literature. Focuses on organization of information, writing critique process, and presentation skills for verbal defense. (1, max. 4)

Science and Technology Mathematics

STMATH 124 CALCULUS I Studies the development of differential calculus, starting with limits, continuity, and the definition of derivative. Emphasizes differentiation techniques and their applications. Prerequisite: a minimum grade of 2.5 in either B MATH 123 or MATH 120, or a score of 154-163 on the MPT-AS placement test, or a minimum score of 2 on AP MAB exam. Offered: AWSpS. (5) NW, QSR

STMATH 125 CALCULUS II Integration theory and techniques with applications in science and engineering. Prerequisite: a minimum grade of 2.0 in either STMATH 124 or MATH 124, or a minimum score of 3 on AP MAB, or a minimum score of 2 on AP MBC exam. Offered: AWSpS. (5) NW, QSR

STMATH 126 CALCULUS III Studies sequences and series, including convergence tests and Taylor polynomials and series, as well as the calculus of curves in the plane and space described in polar, parametric, or vector-valued form. Prerequisite: a minimum grade of 2.0 in either STMATH 125 or MATH 125, or a score of 5 on AP MAB exam, or a minimum score of 4 on AP MBC exam. Offered: AWSpS. (5) NW

STMATH 300 Foundations of Modern Math Introduces students to mathematical argument and to reading and writing proofs. Develops elementary set theory, examples of relations, functions and operations on functions, the principle of induction, counting techniques, elementary number theory, and combinatorics. Places strong emphasis on methods and practice of problem solving. Prerequisite: minimum grade of 2.0 in STMATH 125, or MATH 125. (5) QSR

STMATH 307 Introduction to Differential Equations Introduces ordinary differential equations. Includes first-and second-order equations and Laplace transform. Prerequisite: minimum grade of 2.0 in either STMATH 125, or MATH 125. (5) NW

STMATH 308 Matrix Algebra with Applications Introduces linear algebra, including systems of linear equations, Gaussian elimination, matrices and matrix algebra, vector spaces, subspaces of Euclidean space, linear independence, bases and dimension, orthogonality, eigenvectors, and eigenvalues. Applications include data fitting and the method of least squares. Prerequisite: minimum grade of 2.0 in STMATH 125 or MATH 125 (5) NW

STMATH 310 Mathematical Game Theory Covers mathematical aspects of Game Theory, including symmetric and asymmetric games, zero-sum and non-zero-sum games, mixed and pure strategies, equilibria, and strategic moves. Examines examples from several disciplines including anthropology, philosophy, business, social psychology, and biology. Prerequisite: minimum grade of 2.0 in STMATH 124, or MATH 124. (5)

STMATH 324 Multivariable Calculus Introduction to the concepts and computation techniques of multivariable calculus, including partial derivative, the chain rule, double and triple integrals, vector fields, line integrals, surface integrals, Green's Theorem, Stokes' Theorem, and the Divergence Theorem. Prerequisite: minimum grade of 2.0 in STMATH 126, or MATH 126. Offered: AWSpS. (5)

STMATH 341 Introduction to Statistical Inference Stochastic concepts including probabilistic underpinnings of statistics, measures of central tendency, variability, correlation, distributions, sampling, and simulation. Exploratory data analysis including experiments, surveys, measures of association and inferential statistics. Credit is not given for both STMATH 341 and STMATH 390. Prerequisite: minimum grade of 2.0 in STMATH 124, B MATH 144, or MATH 124. (5) QSR

STMATH 350 Applied Number Theory and Cryptography Introduces number theory, including divisibility, primes, the Euclidean algorithm, modular arithmetic, Fermat's Little Theorem, and the fast power method. Emphasizes applications in cryptography, including Diffie-Hellman key exchange, public key cryptography, the ElGamal and RSA cryptosystems, and elementary elliptic curve

techniques. Prerequisite: minimum grade of 2.0 in STMATH 308. (5)

STMATH 381 Discrete Mathematical Modeling Introduction to methods of discrete mathematics, including topics from graph theory, network flows, and combinatorics. Emphasis on these tools to formulate models and solve problems arising in variety of applications, such as computer science, biology, and management science. Prerequisite: a minimum grade of 2.0 in CSS 132, CSS 142, CSE 142, or AMATH 301. (5)

STMATH 390 Probability and Statistics in Engineering Covers concepts of probability and statistics; conditional probability, independence, random variable, and distribution functions; descriptive statistics, transformations, sampling errors, confidence intervals, least squares, and maximum likelihood; and exploratory data analysis and interactive computing. Credit is not given for both STMATH 341 and STMATH 390. Prerequisite: minimum grade of 2.0 in STMATH 324, or MATH 324. (5) NW

STMATH 402 Abstract Algebra I Introduction to group theory. Emphasizes examples, including cyclic, dihedral, and symmetric groups. Theoretical concepts include: Cosets and Lagrange's theorem; direct products; homomorphisms, normal subgroups, quotient groups, and the fundamental isomorphism theorems; orders and Cauchy's theorem; and the structure of finitely-generated abelian groups. Prerequisite: minimum grade of 2.0 in STMATH 300 or MATH 300; and minimum grade of 2.0 in STMATH 308 or MATH 308. (5)

STMATH 403 Abstract Algebra II Introduction to the theory of rings and fields, including ideals, homomorphisms, quotient rings, integral domains and their fields of fractions, polynomial rings, field extensions, vector spaces, geometric constructions via straight-edge and compass, the classification of finite fields, unique factorization domains, and Euclidean domains. Prerequisite: minimum grade of 2.0 in STMATH 402, or MATH 402. (5) QSR

STMATH 405 Numerical Analysis I Methods and theory for numerically solving systems of equations, both linear and nonlinear. Topics include numerical error, stability and conditioning, root finding, direct and iterative methods for linear systems, linear least squares, eigenvalue problems, and nonlinear systems. Prerequisite: minimum grade of 2.0 in STMATH 308 or MATH 308; and minimum grade of 2.0 in STMATH 126 or MATH 126; and minimum grade of 2.0 in CSS 132, CSS 142, CSE 142, CSS 161, or AMATH 301. (5)

STMATH 406 Numerical Analysis II Methods and theory for numerically approximating functions, their integrals and derivatives, and solutions to ODEs. Topics include polynomial and piecewise polynomial interpolation, the Fourier transform, numerical differentiation and integration, and approximate solution of ODEs using Euler and Runge-Kutta methods. Prerequisite: Minimum grade of 2.0 in STMATH 307 and STMATH 405. (5)

STMATH 407 Linear Programming Maximize and minimize linear functions subject to constraints consisting of linear equations and inequalities. Define linear optimization models from problem description. Solve linear programming problems using the simplex method. Conduct duality and sensitivity analysis for linear programming. Prerequisite: minimum grade of 2.0 in STMATH 308 or MATH 308; and minimum grade of 2.0 in STMATH 126 or MATH 126; and minimum grade of 2.0 in CSS 132, CSS 142, CSE 142 or AMATH 301. (5)

STMATH 408 Nonlinear Optimization Maximize and minimize nonlinear functions, constrained and unconstrained; nonlinear programming problems and methods. Topics include: Lagrange multipliers, Kuhn-Tucker conditions, convexity, quadratic programming, steepest-descent method, and Newton and quasi-Newton methods. Prerequisite: minimum grade of 2.0 in STMATH 308 or MATH 308; and minimum grade of 2.0 in STMATH 324 or MATH 324; and minimum grade of 2.0 in STMATH 300; and

minimum grade of 2.0 in CSS 132, CSS 142, CSE 142 or AMATH 301. (5) QSR

STMATH 409 Advanced Linear Algebra A mathematically rigorous treatment of vector spaces; linear transformations and matrices; matrix operations and linear systems; determinants; eigenvalues, eigenvectors, and diagonalization; canonical forms; and special matrices including permutation and nonnegative matrices. Prerequisite: minimum grade of 2.0 in each of STMATH 300 and STMATH 308; recommended: STMATH 300 and STMATH 308. (5)

STMATH 420 History of Mathematics Surveys the historical development of mathematics from its earliest beginnings, through the emergence of calculus, and into the early 20th century. Prerequisite: minimum grade of 2.0 in STMATH 126 or MATH 126. (5) NW, QSR

STMATH 424 Real Analysis I Introduction to real analysis: the real number system, metric spaces, the topology of real Euclidean space, the Heine-Borel Theorem, sequences, Cauchy sequences, series and tests for convergence, continuous functions, the intermediate and extreme value theorems, differentiability, the mean value theorem, power series, and Taylor's Theorem. Prerequisite: minimum grade of 2.0 in STMATH 300 or MATH 300. (5)

STMATH 425 Real Analysis II The Riemann-Stieljes integral and the Fundamental Theorem of Calculus. Sequences and series of functions, uniform convergence and its relationship to continuity, differentiation, and integration, the Stone-Weierstrass Theorem. Continuity and differentiability of functions of several variables, the Inverse and Implicit Function Theorems, and Rank Theorem. Prerequisite: minimum grade of 2.0 in STMATH 424. (5)

STMATH 427 Complex Analysis Complex numbers; analytics functions; sequences and series; complex integration; Cauchy integral formula; Taylor and Laurent series; uniform convergence; residue theory; conformal mapping. Prerequisite: Minimum grade of 2.0 in STMATH 300 or MATH 300; and minimum grade of 2.0 in STMATH 324 or MATH 324. (5)

STMATH 441 Topology Topological spaces, product spaces, quotient spaces, metric spaces, convergence, continuity, separation and countability axioms, connectedness, and compactness. Prerequisite: Minimum grade of 2.0 in STMATH 424. (5)

STMATH 444 Foundations of Geometry Studies classical geometry, including topics from neutral geometry of the triangle, non-neutral Euclidean geometry, spherical geometry, hyperbolic geometry, projective geometry, and symmetries. Emphasizes proof writing. Prerequisite: minimum grade of 2.0 in STMATH 300 or MATH 300 (5)

STMATH 465 Fostering Algebraic Reasoning Focuses on methods of teaching algebra from a developmental perspective, including research-based methods for developing students' algebraic thinking and structure and processes used in algebra. Prerequisite: minimum grade of 2.0 in STMATH 125 or MATH 125. Offered: jointly with B EDUC 465. (5) NW, QSR

STMATH 466 Fostering Geometric Thinking Focuses on methods of teaching geometry from a developmental perspective, including research-based methods for developing students' geometric thinking and structure and processes used in geometry including proof. Prerequisite: minimum grade of 2.0 in STMATH 125 or Math 125. Offered: jointly with B EDUC 466. (5) NW, QSR

STMATH 467 Fostering Statistical Thinking, Data, and Graphical Analysis Focuses on methods of teaching data and graphical analysis and statistical thinking from a developmental perspective, including how to foster secondary students' statistical thinking, and using technological tools to teach key concepts in secondary mathematics using big data sets, graphical analysis, and dynamic visualization. Prerequisite: minimum grade of 2.0 in STMATH 125 or Math 125. Offered: jointly with B EDUC 467. (5) NW, QSR

STMATH 493 Special Topics in Mathematics Covers special topics in advanced mathematics in a classroom setting not currently taught in the mathematics curriculum. Prerequisite: minimum grade of 2.0 in either STMATH 300 or MATH 300. (1-5, max. 15)

STMATH 498 Independent Study in Mathematics Readings course covering special topics in mathematics agreed upon by student and faculty member. (1-5, max. 15)

STMATH 499 Undergraduate Research in Mathematics Undergraduate research project agreed upon by the student and faculty member. (1-5, max. 15)

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XI. Academic Calendar

The academic calendars obtain important dates regarding registration, adding & dropping classes, fee deadlines and more. Online calendars can be found at: http://www.uwb.edu.