

# **ASIAN UNIVERSITY FOR WOMEN**

[WWW.ASIAN-UNIVERSITY.ORG](http://WWW.ASIAN-UNIVERSITY.ORG)

**Academic Bulletin  
2021-2022**

## **ACADEMIC QUESTIONS AND CONCERNS**

If a student has a question, concern, or complaint about her experience in class or about a faculty member, the student should first contact the faculty member directly. If a student wishes to address the issue further, she should meet with the respective Head of Program/Associate Dean.

If a student has questions or concerns about her progress toward graduation, general graduation requirements, or needs assistance with academic advising, academic skills, and/or writing skills, the student should contact her Academic Advisor.

If a student has a question or concern about academic records, registration, drop and add forms, and/or transfer of credits, the student should contact the Head of Academic Registry.

If a student has followed this process but has not been able to resolve her questions, she may contact the Dean of Faculty & Academic Affairs.

## **FINANCIAL AID QUESTIONS AND CONCERNS**

Students with questions about financial aid can contact the Dean of Students in the first instance: Rania Kassem (rania.kassem@auw.edu.bd). There is a limited financial aid fund: [financial.aid@auw.edu.bd](mailto:financial.aid@auw.edu.bd). The students can also reach out to the Finance Office for further assistance.

## **VALIDITY OF THE ACADEMIC BULLETIN**

The Academic Bulletin is valid at the time of publication for the duration of the Academic Year 2021/22. Updates may be published in the course of the year, and will be circulated to all faculty, students and staff. An electronic copy of this publication is available at <https://asian-university.org/academic-programs/academic-calendar-bulletin>

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## General University Information

AUW is an independent, international organization governed by a special Charter enacted by the Parliament of Bangladesh in 2006 (Asian University for Women Act 2006).

### Mission

AUW seeks to graduate women who will be skilled and innovative professionals, service-oriented leaders in the businesses and communities in which they will work and live, and promoters of intercultural understanding and sustainable human and economic development in Asia and throughout the world. More specifically, AUW seeks:

1. To educate women to become highly motivated and effective professionals, leaders, and service-oriented citizens.
2. To provide a vibrant and diverse residential learning community where highly talented women and those with uncommon potential from many cultural and religious backgrounds can grow both intellectually and personally.
3. To create a student-focused learning environment where the arts, humanities, and natural and social sciences establish a broad base of inquiry, where disciplinary and independent studies provide learning depth, and where applied studies in both the general studies and majors' curricula require students to link theoretical understanding with contemporary issues and challenges facing Asia and the world; and
4. To focus student learning on the acquisition of intellectual abilities, reflective personal growth, leadership abilities, and a service-oriented outlook.

### A Brief History of AUW

The story of AUW began well before its inaugural Access Academy class entered in 2008. The idea for the University grew out of the World Bank/UN Task Force on Higher Education and Society. In 2000, the Task Force published its findings in a report entitled "Higher Education in Developing Countries: Peril and Promise" (see <http://www.tfhe.net/>), which concluded that developing countries must improve the quality of their institutions of higher learning, in both governance and pedagogy, in order to compete in an increasingly globalized, knowledge-based economy. AUW was partly a response to such a need.

In January 2004, the Government of Bangladesh granted as last estate for the construction of AUW's permanent campus in Chittagong. Fundraising and planning efforts for AUW officially began in November 2001, when the AUW Support Foundation was incorporated as a non-profit institution under section 501(c)3 of the United States Internal Revenue Code. AUW's Support Foundation is governed by a Board of Directors, which was established upon the group's incorporation as a non-profit organization. The AUWSF Board of Directors published a Plan of Operations in May 2005, laying out the basic plans for AUW's curriculum, target student population, and sustainability efforts.

AUW began operations in March 2008. Its first cohort of students consisted of 130 young women from six countries: Bangladesh, Cambodia, India, Nepal, Pakistan and Sri Lanka. This inaugural class attended the Access Academy, AUW's year-long bridge program designed to prepare underserved students for the rigors of university education. After completing the Access program, 128 of them continued into the first year of their undergraduate studies, and were joined by a number of direct-entry students who began the undergraduate program in 2009. Also in 2009, AUW's initial Board of Trustees was elected by the International Support Committee of the Asian University for Women in accordance with the provisions of the AUW Charter. You may find further details about the history of AUW at <https://asian-university.org/who-we-are/history/>.

### **AUW Charter**

The AUW Charter is a law adopted by the Parliament of Bangladesh, which gives official status to the University, and the right to award its own degrees. It sets out the general regulations, rights and obligations of the institution, its governance structure and the duties of the Board of Trustees, Chancellor and Vice Chancellor. The AUW Charter is a public document, available at <https://asian-university.org/who-we-are/governance/auw-charter/>

### **University Handbook**

The University Handbook is adopted by the Board of Trustees as a general guideline of the organization and operations of the University and is valid from the time of publication. It is subject to periodic review and updates. Such updates will be circulated to all faculty, students and staff, and incorporated in the Handbook at the beginning of each Academic Year. The University Handbook is a public document, available at <https://asian-university.org/dvteam/academic-bulletin/>

All members of the AUW community are required to familiarize themselves with the AUW Charter and the University Handbook.

### **University Governance**

The Asian University for Women is governed by a Board of Trustees, which is currently chaired by Dr. Dipu Moni, Minister of Education. The initial Board of Trustees was elected by the International Support Committee of the Asian University for Women in 2009 in accordance with the provisions of the Charter of the Asian University for Women. The University also enjoys the support of a number of the most important leaders in government, business, and academia, leaders who are collectively known as the AUW Council of Patrons.

Further information is available at <https://asian-university.org/who-we-are/governance/>

### **Academic Governance**

The Academic Board is responsible for academic governance, academic standards and quality and the student experience. It provides the Board of Trustees with the assurance that the AUW academic strategy is fit for purpose and approves new additions and revisions to academic policies. It has oversight of all academic provision through the quality management and enhancement mechanisms. The Academic Board is chaired by the Vice Chancellor.



Further information about the Academic Board and its Committees is available in the University Handbook at <http://www.auw.edu.bd/about/auw-university-handbook/>

### **University Officers**

|                            |                        |
|----------------------------|------------------------|
| Vice Chancellor:           | Dr. Rubana Huq         |
| Chief Finance Officer:     | -                      |
| Dean of Arts & Sciences:   | Dr. Beena Khurana      |
| Dean of Humanities:        | Dr. David Denis Taylor |
| Dean of Students (acting): | Suman Chatterjee       |

## Academic Programs

The current academic structure of AUW comprises two non-degree preparatory programs, an Undergraduate Core Program (General Education Requirement), five Majors (primary fields of study) and a number of Minors (secondary fields of study). Students who complete the full requirements of the Core Program and their chosen Major qualify for a Bachelor of Arts or a Bachelor of Science. Full details of the academic programs are available further in the Academic Bulletin.

### Non-Degree Programs

Pathways for Promise (Pre-Access) is an intensive English language training program launched in 2016, which prepares young women from socio-economically challenged backgrounds to enter the AUW Access Academy and thereafter the full undergraduate program.

Access Academy prepares students from diverse cultural and educational backgrounds for the rigorous, American-style undergraduate liberal arts curriculum at the Asian University for Women.

The majority of AUW students enter the University through the Pathways for Promise or through the Access Academy programs, both of which last for a full academic year.

Special Workshops and Training Programs are offered throughout the year for students, faculty and staff, to enhance their knowledge in a specific field or provide practical experience. AUW hosts multiple such events, including many visiting faculty from partner institutions across the world. AUW welcomes initiatives from its own faculty to organize co-curricular activities that enhance student learning, feature research projects and outcomes, and connect AUW with the wider academic community.

### Degree Programs

AUW follows a US-style liberal arts education curriculum, including an Undergraduate Core Program (General Education Requirement) common to all students, selection of Majors, Minors and/or Free Elective Courses. The graduation requirement for a bachelor's degree is based on successful completion of 120 credits (generally based on 30 4-credit courses) taken over a period of three years.

| Majors  | Minors                |
|---|-----------------------|
| <b>B.S. in Bioinformatics</b>                     | Asian Studies         |
| <b>B.A. in Economics*</b>                         | Biological Sciences   |
| <b>B.S. in Environmental Science*</b>             | Computer Science      |
| <b>B.A. in Politics, Philosophy and Economics</b> | Development Studies   |
| <b>B.S. in Public Health*</b>                     | Economics*            |
|   | Finance               |
|   | Gender Studies        |
|   | Mathematics           |
|   | Performing Arts (new) |
|   | Psychology            |
|   | Public Health*        |

**\* Also offered as Minors**

## Double Majors

AUW introduced Double Majors in the Academic Year 2018-2019 in the science programs. At present, students with a minimum CGPA of 3.0 at the end of their UG1 year may apply for a double major in one of the following options:

Bioinformatics and Environmental Sciences

Bioinformatics and Public Health

Environmental Sciences and Public Health

Students who are interested but engaged in a Major outside of these programs may contact their Advisor or Program Head for inquiries about completing a Double Major.

## Academic Structure and Curriculum

Emulating a US-style liberal arts education model, AUW generally admits students into one of the two preparatory non-degree programs, depending on their academic background and attainment. Some students are admitted into Pathways for Promise (Pre-Access) Program for a year of intensive English language training, and progress to Access Academy upon successful completion. Other students, who pass the AUW admissions examination, are invited to Access Academy or for direct entry into the Undergraduate (UG) program. The majority of AUW students enter the University either through Pathways or through Access Academy, in a carefully designed progression path to prepare them for the rigors of undergraduate studies.

| Year  | Level           | Program   | Qualification                   |
|-------|-----------------|---|---------------------------------|
| 3     | UG (40 credits) | Major / Minor / Free Electives (incl. Senior Thesis)    | Bachelor's Degree (120 credits) |
| 2     | UG (40 credits) | Major / Minor / Free Electives (incl. Research Project) | -                               |
| 1     | UG (40 credits) | Core Program (General Education Requirement)            | -                               |
| Entry | Non-degree      | Access Academy  | Certificate                     |
| Entry | Non-degree      | Pathways for Promise (Pre-Access)                       | Certificate                     |

| Majors  | Minors                 |
|---|------------------------|
| <b>B.Sc. in Bioinformatics</b>                    | Asian Studies          |
| <b>B.A. in Economics*</b>                         | Biological Sciences    |
| <b>B.Sc. in Environmental Science*</b>            | Computer Science       |
| <b>B.A. in Politics, Philosophy and Economics</b> | Development Studies    |
| <b>B.Sc. in Public Health*</b>                    | Economics              |
|   | Environmental Sciences |
|   | Finance                |
|   | Gender Studies         |
|   | Mathematics            |
|   | Performing Arts (new)  |
|   | Psychology             |
|   | Public Health          |

\* Also offered as Minors

The Asian University for Women aspires to deliver an integrated mission-driven curriculum that:

1. is enduring,
2. blends the best of western and Asian educational traditions,
3. speaks to and reflects the region,
4. provides students with an understanding of Asia and its challenges as well as an awareness of and experience with other regions/traditions through study and international experience,
5. develops critical thinking and reasoning skills,
6. develops exceptional writing and speaking skills,
7. encourages tolerance and an understanding of difference,
8. instills a strong commitment to public service,
9. prepares students to be confident and ethical leaders, and
10. prepares students for graduate study.

Upon entry in the Undergraduate Program, students are invited to select courses from among the main rubrics of the Core Program (General Education Requirement) which are common to all students and are designed to instill the characteristics above: Social Analysis (SOCA); Ethical Reasoning (ETHR); Literature, Civilization Studies and the Arts (LCSA); Natural Sciences (NSCI); Computer Science (CSCI); Mathematics (MATH); and the Writing Seminars (WSEM). Additional courses which students take may incorporate a Writing Intensive component, and topics specifically focused on Women Shaping Society and on Asia.

By the end of their first undergraduate year, students are invited to declare a Major field of study, which will equip them with the cognitive knowledge and competencies arising from the specific degree program. The option to select a Minor as a secondary field of study, or Free Elective courses, enables students to cross disciplinary boundaries to enhance their understanding of specific or global problems, in a regional context, engage in interdisciplinary research projects and deepen their understanding of the challenges faced by the countries and communities they come from.

Benchmarked against the curriculum framework of some of the most prestigious liberal arts institutions in the world, this curriculum is designed and delivered by an internationally educated faculty who embrace the mission of AUW and contribute a significant effort to individual student advising and mentorship.

While many students choose to pursue graduate programs at home and abroad in a variety of fields, the curriculum also offers the graduates readiness for immediate employment, through integrated internships and practicum course

## Pathways for Promise (Pre-Access)

Pathways for Promise is a non-degree foundation program.

### Mission

Pathways for Promise is an initiative at the Asian University of Women, launched in 2016, which prepares young women from socio-economically challenged backgrounds to enter the AUW Access Academy and thereafter the full undergraduate program.

### Program and Curriculum Overview

Pathways for Promise is an intensive one-year residential program tailored to the needs of a sector of students who, were it not for Pathways, would not have the opportunity to study a Liberal Arts undergraduate course and reap the numerous consequent benefits for both themselves and the communities they come from. The selection process checks that women entering Pathways show the potential for both academic excellence and future leadership. A low level of English language skills is an obstacle to both academic development and the global citizenship skills that AUW cultivates in our students.

Accordingly, a substantial focus of the Pathways Program is on developing the student's English language skills in an approach which equips the students with the linguistic and communicative competencies that allows them to become effective communicators in both the academic and social AUW communities.

The Pathways competency-based curriculum uses an approach in which language is seen as a medium of interaction and communication between people who want to achieve specific goals and purposes. The ability to use language as a speaker, listener, reader and writer is critical in the goals of the Pathways curriculum. Interactive and receptive competencies feed into productive competency in which the student is able to produce coherent, appropriate and relevant messages in writing and speaking.

The English language skills developed within Pathways also embed critical thinking and reflective skills, meaning that students not only improve their English competencies, but are empowered to communicate in a manner which underscores the academic values of AUW. Another important sub=aim of the curriculum goals is to develop team working and leadership skills. These behavioral competencies are achieved not only by core curriculum activities but also through extracurricular activities, such as project work and community service.

Enabling students to take responsibility for their own learning is also an integral aspect of the curriculum and students are given guidance in autonomous learning approaches through an introduction to study skills. The program also includes a quantitative reasoning component and awareness and practice of good physical health is achieved through Karate and Classical Dance courses.

These different strands of the program unite to provide a pathway of holistic development and preparation for the Access Academy.

## **Required Courses**

Students enter the Pathways program at varying levels of English competency and are therefore provided with three entry points.

### **English Reading and Writing Level 1, 2, 3**

The English reading and writing courses provide an integrated and structured approach with increasing levels of difficulty through the three levels. The three levels are calibrated to the international descriptors of IELTS and the Common European Framework. In reading and writing course 3, there is concentrated focus on English for Academic Purposes and students are able to use English for Academic purposes reading skills, such as inferring meaning from context and writing skills such as logically sequencing and organizing complex ideas into a discursive essay.

### **English Listening and Speaking Levels 1, 2, 3**

The listening and speaking courses follow a similar format to the reading and writing courses using an approach in which the 3 levels all interlink in structured progression. General English foundation skills are acquired in levels 1 and 2 leading into a more focused English for Academic purposes at level 3 in which students acquire skills such as inferring speaker attitude in listening and using reflective and critical thinking skills in their spoken discourse.

### **Information Technology (IT)**

This course provides an opportunity for students to simultaneously improve their English skills whilst equipping them with the IT skills which will ensure they are able to utilize technologies for both Pathways self-study purposes and the demands of the Access Academy and AUW Undergraduate courses.

### **Mathematics**

This course is offered as a requirement for all Pathways students to review foundational mathematics concepts, develop critical thinking abilities, and to ensure students' understanding of quantitative reasoning. The course applies the concepts of evaluating algebraic expressions, geometry and data analysis to real-life situations. Upon completion of this course, students will have a foundation of math fluency that will support them throughout their future coursework in Access Academy and their undergraduate studies.

### **Karate / Classical Dance**

These courses provide a program of physical development for students which enhances awareness of the benefits of exercise and provides an opportunity for undertaking exercise in a guided and disciplined environment.

### **Extensive Reading**

This course utilizes the resources of the library, particularly graded readers, in which students read for pleasure outside of the classroom. In addition, students are guided to keep study journals, reflecting on and assessing their reading skills and recording vocabulary.

### **Assessment at Pathways and Promotion Requirements to Access Academy**

A minimum overall score of 60% is required to progress from Pathways for Promise to the Access Academy.

The rubric of the Admissions Test is aligned with International English language Testing system rubric to ensure that testing systems are robust, fair and accountable. The rubric is also used throughout the Pathways Academic Year for semester assessment. Training is provided to teachers in using the rubric to ensure a standardized approach.

## Access Academy

Access Academy is a non-degree foundation program.

### Mission

The Access Academy prepares students from diverse cultural and educational backgrounds for the rigorous, American-style undergraduate liberal arts curriculum at the Asian University for Women.

### Program and Curriculum Overview

The Access Academy is an intensive one-year residential program that develops students academically, socially, and culturally. The main focus of the academic curriculum is to foster English communication skills, critical thinking, problem-solving, and strategies for life-long learning. The courses build students' skills in academic English reading, writing, listening, speaking, and cover content in mathematics, computers, world history and geography, science, and leadership. Additionally, students are encouraged to enhance their education through extra-curricular clubs, events, and use of on campus resources such as the Library and the Writing Center. The Access Academy trains young women to be assertive, confident, and culturally sensitive critical thinkers, communicators, high-achieving undergraduate students, and citizens of a global community.

Successful completion of the Access Academy program leads to admission to the Asian University for Women undergraduate program.

### Course Schedule

Each fall or spring semester, an Access Academy student will take five courses: all four of the core courses described below plus one elective of her choice. Level 200 and 300 core courses can only be taken if a student has demonstrated mastery of the previous level of that course, either by taking and passing it or by scoring well enough on a placement test to opt out of it. Electives do not have any prerequisites, so they can be taken at any time.

Each summer semester, an Access Academy student will take three courses, with priority given to courses that contribute toward her promotion requirements for UG, as described below.

A student who fails a course must retake it in the following semester. If she passes the retaken course, her new grade will replace the previous failing grade. A student who has completed level 300 of one or more core courses but has not yet met the requirements for promotion to UG can take additional electives, volunteer as a teaching assistant in level 100 of that core course, or audit (observe) a UG course in order to fill her schedule.

### Core Courses

#### [ENG0100, ENG0200, ENG0300] Language and Composition

This course builds skills in rhetoric and composition to enable students to express themselves in clear, poised academic writing. The first term emphasizes writing as a process, including invention, composition, revision, and



editing/proofreading. Typically, the essays in this term include a personal narrative and an expository essay, which often serves as students' first exposure to theses-driven essays. The second term focuses on composing sound academic arguments and typically includes rhetorical analysis as well as an argumentative formal academic essay. While the course is primarily focused on developing critical thinking and composition skills (and not strictly on language acquisition), pedagogy and content are informed in part by ESL/EFL methodologies.

#### **[ENG0110, ENG0210, ENG0310] Reading Across the Disciplines**

This one-year course emphasizes reading and analysis of various genres of fiction, non-fiction, and academic texts. The overarching goals focus on reading comprehension skills and strategies, expansion of academic vocabulary, exposure to a wide range of academic texts, and responding analytically to texts through writing and discussion. The first term emphasizes foundational skills in comprehension, vocabulary-building, analysis, and builds in-depth awareness of intellectual property and plagiarism. The second term focuses on the development of persuasive and independent argument in texts. Students are taught to analyze and evaluate the thesis and supporting claims of a text and to recognize fallacies in arguments.

#### **[MATH0100, MATH0200, MATH0300] Precalculus**

This course exposes students to a rigorous level of mathematics, essential to the study of UG level courses under Liberal arts and Sciences. The focus of this course is primarily on various types of functions: polynomial, rational, exponential, logarithmic and trigonometric. The students will also learn about the behavior of functions through graphs and transformations; they will gain insight into the properties of these functions and their inverse forms. At the end of the course, students will be able to apply a variety of techniques to abstract and real-life problems alike.

#### **[COMP0100, COMP0200, COMP0300] Computing and Programming**

This course covers the basics of computer systems, computer-oriented problem-solving methods, and a hands-on introduction to the structured programming using C programming language. The course includes topics such as numbering systems, processor and memory organization, input/output devices, the basic C language syntax, variable declaration, data types, basic operators, program flow and control structures, defining and using functions, and simple data structures such as arrays and pointers. The methodological approach to program design, implementation and debugging, with emphasis on problem-solving, will also be covered.

### **Electives**

#### **[CIV0100] Modern History**

This course is an introduction to the study of World History, including language, religion, politics, the arts, current events, sociology, and gender. Students learn skills to interpret the ways major turning points of human history have shaped our modern world and have created group and individual identities. The skills emphasized include the ability to comprehend academic lectures and to deliver polished oral presentations. Themes include: 1) introducing a survey of human societies from the fall of the Roman Empire to the modern day, 2) raising student awareness of our increasingly globalized world, while maintaining a regionally specific focus, 3) analyzing the implications of current events and their historical backgrounds, 4) comparing similarities and respecting differences across world cultures, and 5) learning to identify broad historical themes and patterns.

#### **[SCIO100] Biology**

The right to health means that everyone should be entitled to control their own health and body, including having

access to reproductive information. Focusing on this idea this course is designed to provide conceptual understanding of biological science to students from a wide variety of academic backgrounds and interests. The course is intended to foster a basic understanding of biology and biological issues of our new age society such as healthy eating, female reproductive health, viral infection, vaccination, cloning, genetic engineering, bioethics etc. The main goal of this course is to enhance students' critical thinking, vocabulary, reading, writing and analysis skills through wide range of academic text. Apart from academic writing exposure the course will also prepare the students for group and individual research and oral presentation.

#### **[SEM0100] Leadership Seminar**

This course is designed to introduce Access Academy students to qualities of effective leadership and to promote active citizenship at AUW and in the community at-large. Students will explore themes of social justice, including race and gender, cross-cultural communication, and activism while gaining practical professional skills such as public speaking and working in teams. The course aims to foster an entrepreneurial mindset that trains students to critically analyze issues in their communities and to seek creative solutions.

### **Assessment at Access and Promotion Requirements to UG Program (revised December 2020)**

Each student who enters the Access Academy has undergone a rigorous admission process with the expectation that she will be prepared after one calendar year (three semesters) to matriculate in the university.

The standards for promotion from Access Academy to the undergraduate program are as follows:

- **Early promotion:** A student who has (a) passed all level 300 core courses, passed one elective course, and maintained a CGPA of at least 2.0, or (b) passed all level 200 core courses, passed one elective course, and maintained a cumulative grade point average (CGPA) of at least 3.5 is determined to have successfully completed Access Academy and may move on to the undergraduate program. A student who places out of lower-level core courses may be able to achieve this in one or two semesters.
- **Standard promotion:** A student who has passed at least 9 core courses (including at least one level 300), passed one elective course, and maintained a CGPA of at least 2.0 after three semesters in Access Academy is determined to have successfully completed Access Academy and may move on to the undergraduate program.
- **Delayed promotion:** A student who has not met the course or CGPA requirements for standard promotion after three semesters in Access Academy may stay for an additional semester in order to retake courses that she failed or earned less than 2.0 in, with her new scores replacing her previous ones. If she has passed at least 9 core courses plus one elective, and/or raised her CGPA to at least 2.0 after this additional semester, she may move on to the undergraduate program.

A student who fails to achieve the delayed promotion requirements above will make an exit from AUW with a Certificate of Participation for Access Academy.

### **Promotion Ceremony**

At the end of each semester, each student who has met the promotion requirements for UG described above receives a Certificate of Completion, which is distributed during a promotion ceremony. Students have access to their Access Academy academic records from the Academic Registrar's office upon starting the undergraduate program.

# The Undergraduate Program

## Graduation Requirements

Graduation Requirements for students entering the undergraduate program in 2019 summer and onward

|                             |                                     |                    |
|-----------------------------|-------------------------------------|--------------------|
| Core Curriculum             | 11 courses                          | 44 credit hours    |
| Major Concentration         | 10-16 courses                       | 40-64 credit hours |
| Free Electives and/or Minor | 2-8 courses (minors 5 or 6 courses) | 12-32 credit hours |
| Total                       | 30 courses                          | 120 credit hours   |

Graduation Requirements for students entering the undergraduate program in 2015 through 2018

|                             |                                     |                    |
|-----------------------------|-------------------------------------|--------------------|
| Core Curriculum             | 12 courses                          | 48 credit hours    |
| Major Concentration         | 10-16 courses                       | 40-64 credit hours |
| Free Electives and/or Minor | 2-8 courses (minors 5 or 6 courses) | 12-32 credit hours |
| Total                       | 30 courses                          | 120 credit hours   |

Graduation Requirements for students entering the undergraduate program from 2012 to 2014

|                             |                                      |                    |
|-----------------------------|--------------------------------------|--------------------|
| Core Curriculum             | 12 courses                           | 48 credit hours    |
| Major Concentration         | 10-16 courses                        | 40-64 credit hours |
| Free Electives and/or Minor | 4-10 courses (minors 5 or 6 courses) | 16-40 credit hours |
| Total                       | 32 courses                           | 128 credit hours   |

All undergraduate students are required to complete successful semesters of physical education (PE) in order to graduate. The first two semesters must be completed prior to commencing the UG3 year. However, students graduating during the COVID-19 Pandemic will not be required to complete three semesters of mandatory physical education (PE) worth 3-credits.

As of Spring 2020 onward, students will not be required to fulfill the PE requirement until further notice or until in-person classes for all students are possible.

Each student may only take four courses each semester during the first year and no less than three courses per semester. Students with a cumulative GPA of 3.00 or higher may take five courses in the subsequent semester.

## The Core Program (General Education Requirement)

11 courses; 44 credit hours

### Mission Statement

The Core Curriculum at the Asian University for Women is an integral part of the liberal arts and sciences education experience for our students. Modeled after the general education curriculum at the University of Chicago, AUW's core curriculum is designed to offer the undergraduate students breadth of knowledge across disciplines and exposure to diverse modes of thinking across seven subject areas:

1. Social Analysis (SOCA)
2. Ethical Reasoning (ETHR)

3. Literature, Civilization Studies, and the Arts (LCSA)
4. Natural Sciences (SCI)
5. Mathematics (MATH)
6. Writing Seminars (WSEM)
7. Computer Science (CS)

### Summary of CORE Requirements

Of the 120 credit hours AUW students are required to complete for graduation, 44 credits are reserved for required courses in the core curriculum, which students complete in their first (and part of their second) undergraduate year. These 44 credits are distributed among the core subject areas as follows.

| Core Area                                    | No. of Courses | Year or Prerequisites           |
|--|----------------|---------------------------------|
| Social Analysis                              | 1              | UG1                             |
| Social Analysis or Ethical Reasoning         | 1              | UG1 or 2                        |
| Literature, Civilization Studies, & the Arts | 2              | UG1 and 2                       |
| Natural Science                              | 2              | UG1                             |
| Computer Science                             | 1              | UG 1 or 2                       |
| Mathematics                                  | 1              | UG1                             |
| Writing Seminars                             | 2              | UG1                             |
| Social Analysis or Ethical Reasoning         | 1              | PPE Majors only                 |
| Calculus I                                   |                | Required for all but PPE Majors |

Students are encouraged to take the majority of the core courses during the first UG year, including the summer semesters. While upper level Mathematics and the Writing Seminars are offered only during the 16-week Fall and Spring Semesters, all other courses are offered across all semesters, including the summer. Ideally, each student should take at least 10 courses in her first year. The names and descriptions of courses in each category are given in the course descriptions section of this Bulletin.

Selecting the most optimal course combination is essential for students to cover the required rubrics and progress to their Major and Minor (or Free Electives) field of study. Some core courses are a pre-requisite requirement, or can be combined with the requirement of the Major or Minor.

### Required Courses

(11 courses, 44 credits)

Social Analysis (1)\*

Ethical Reasoning (1)\*

Literature, Civilisation Studies, Arts (2)\*

Writing Seminars (2)

Math (Prob and Stats) (1)

Natural Science (2)

Computer Science (1)

11th course:

A second SOCA or ETHR is required for all Politics, Philosophy & Economics (PPE) students who don't require Calculus 1. A second SOCA or ETHR can be taken by any SCI/ECON student as a free elective.

Math (Calculus 1): Required for all students except for those going into PPE.

## Learning Outcomes

The Learning Outcomes for Core Curriculum at AUW are based on the Essential Learning Outcomes developed and promoted by the AAC&U (Association of American Colleges and Universities) and LEAP (<https://www.aacu.org/leap/essential-learning-outcomes>). In the coming academic year (2019-2020), we intend to draw on the associated VALUE rubrics developed by AAC&U to ensure that the Essential Learning Outcomes are consistently met and achieved across all CORE courses (<https://www.aacu.org/value>). The Essential Learning Outcomes are:

- Intellectual and Practical Skills
- Inquiry and analysis
- Critical thinking
- Creative thinking
- Written communication
- Oral communication
- Reading
- Quantitative literacy
- Information literacy
- Teamwork
- Problem solving
- Personal and Social Responsibility
- Civic engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning
- Foundations and skills for lifelong learning
- Global learning
- Integrative and Applied Learning
- Integrative learning
- Course Category Description

### Social Analysis (SOCA)

Core courses in the subject area of Social Analysis are designed to introduce students to: (i) the methods of reasoning and analysis employed in the social sciences, and (ii) the methodologies of qualitative research. The Social Analysis Core subject area also provides students introductory courses for several minors offered at AUW, including Development Studies, Gender Studies, and Psychology. A sample list of past courses offered in Social Analysis includes “Introduction to Development Studies,” “Social and Political Thought,” “Introduction to Gender Studies,” “Mind and Behavior,” “Globalization and Society,” and “Qualitative Research Methods.”

### Ethical Reasoning (ETHR)

Core courses in Ethical Reasoning are designed to introduce students to a framework of ethical reasoning and moral decision-making through the study and application of diverse philosophies that have been influential throughout history. Courses in this subject area approach questions such as, “What principles should guide one’s actions?,” “How can ethical theories be applied to different fields of study?,” “How

should we understand and define ethical concepts such as right and wrong, virtue, and happiness?," and "What is the relationship between values and facts or ethics and science?" A sample list of past courses offered in Ethical Reasoning includes "Introduction to Ethical Reasoning," "Logic and Critical Thinking," "The Morality of Massacres and Genocides," and "Ethics in Research."

### **Literature, Civilization Studies, and the Arts (LCSA)**

The Core subject area of Literature, Civilization Studies, and the Arts is designed to provide students with a breadth of knowledge and analytical skills through a study of the arts (literature, performing arts, and fine arts) and the history, religious philosophies, and languages of human civilizations. A sample list of past courses offered in Literature, Civilization Studies, and the Arts includes "Introduction to World Literature", "Introduction to Asian Religions", "Introduction to the Humanities", "Documentary Filmmaking" (practicum), and "Basics of Verbal Acting" (practicum).

There are two types of LCSA courses categories: LCSA Theory (e.g. History, Religion, Philosophy), and LCSA Performing Arts (e.g. Filmmaking, Verbal Acting, Pantomime, Dance, Music). To fulfill the requirements, you must complete a total of 2 LCSA. This must include 1 LCSA Theory and 1 LCSA Performing Arts.

Please note, from Spring Semester of 2022, language classes will not be categorized as mandatory LCSA courses.

### **Science (SCI)**

An understanding of the human body and the natural world provided by courses in the Core subject area of science provides students with a framework of inquiry, observation, and experimentation that can be developed further in later work done in the science majors or transferred and applied as elements of critical thought to other subjects of study. The Core curriculum features several courses in the natural sciences, offering selections that act as introductory courses for non-science majors and as prerequisite courses for science majors. A sample list of past courses offered in science are "natural science courses-General Chemistry, General Physics and Biology-I.

### **Mathematics (MATH)**

Core courses in the mathematics subject area are designed to develop skills in quantitative reasoning, logic, and abstraction as modes of thinking that can be applied to major-level courses across the disciplines. The primary Core courses offered in Mathematics each semester during the regular academic year (fall and spring semesters) are "Calculus I" and "Probability and Statistics," both of which are either prerequisite or recommended courses for all majors currently offered at AUW. Additional past course topics offered in Mathematics include "Calculus II," and "Introductory Statistics."

### **Computer Science (CS)**

An essential trait among educated citizens in an increasingly technological world is literacy in the foundations of computer science. This element of the Core curriculum is designed to provide students with introductory-level skills in computer programming and programming languages. AUW incorporates in its core curriculum a course developed by Harvard University, CS50x, which is designed for students with no prior programming experience and provides them with a foundation of knowledge in programming, as well as skills in problem-solving and working with algorithms. To complete the requirement in this Core category, AUW students must take only one course, CS50x ("Introduction to Computer Science"), preferably during their UG1 year.

## **Writing Seminars (WSEM)**

One element of leadership and the work that students will do in their academic majors and later professional lives is the ability to communicate clearly and effectively in writing. Recognizing that students at AUW will be expected to write several research essays regardless of the major they enter, the Writing Seminars are designed to give students an introduction to the logic of academic argumentation, interdisciplinary research methods, and the ethical standards of academic honesty and research expected of professional scholars. A sample list of past course topics offered in the Writing Seminars includes "Women and Autoethnography," "Challenging Traditions, Upholding Values: Cultural Traditions in Film," "Bioethics," "The Family and Society," "Writing Ethnography: Ethics and Methods," "Globalization," "Social Justice: Perspectives from Economics," and "Indigeneity and Representation". Students are expected to complete both Writing Seminar courses by the end of their UG1 year of study. Writing Seminar courses are only taught during the regular academic year, with WSEM I courses primarily offered during fall semester and WSEM II courses primarily offered during spring semester. Although the research topics of Writing Seminar courses vary from section to section, a consistent learning experience across sections is achieved through the use of common program and course objectives shared by all Writing Seminar faculty.

### **Program Mission**

The mission of the UG-1 Writing Program is to train students to employ process-based writing as a tool for discovery, creativity, self-reflection, and critical analysis and to engage in ethical practices at all stages of the writing process. To this end, the writing program will provide students with the opportunity to analyze and compose arguments in multiple disciplines and genres. Through interdisciplinary course design and a focus on developing independent research skills, the writing program will also train students to approach social, ethical, and policy debates innovatively, preparing them for later academic success and leadership in their communities.

### **Program Objectives:**

- To teach students to write clear, evidence-based, claims-driven argumentative essays.
- To teach the ethical standards expected of professional scholars regarding academic honesty, human research, interpretation of data, and application of evidence.
- To introduce students to the methodological practices and citation styles used by multiple disciplines.
- To provide students the instruction and resources necessary to produce writing that follows professional standards of grammar and mechanics.
- To promote writing as a mode of thinking by assigning frequent informal and ungraded writing exercises in addition to formal argumentative research papers.
- To coordinate with the Writing Center and the Center for Teaching and Scholarship to assist with faculty development in writing instruction.
- To coordinate with the Access Academy to design four semesters of sequential course objectives and writing assignments.

### **Course Sequence Objectives:**

#### **UG1 (First Semester):**

By the end of their first semester, students will be able to:

- Continue applying the reading and writing skills developed during their Access Academy year.

- Accurately summarize academic arguments and practice synthesizing multiple sources.
- Consistently and correctly cite both standard and non-standard sources using APA citation styles.
- Explore the ethical implications of their arguments.
- Learn the basic research methodologies used by at least one discipline.
- Give a focused oral presentation using a central writing component.
- Demonstrate skills in providing substantive written and oral feedback on their peers' writing.
- Learn and practice forms of critical self-assessment of their writing.
- Learn to transform their opinions into claims and to modify their opinions based on available evidence.

### UG1 (Second Semester)

By the end of their second semester, students will be able to:

- Continue applying skills developed during their UG-1 first semester writing seminar.
- Effectively synthesize academic sources to accurately reflect the positions of multiple authors in a literature review.
- Learn to transfer MLA citation skills to other discipline-specific citation styles.
- Identify, revise, and pursue guiding questions for topics of research.
- Explain how to integrate field work (qualitative and quantitative) into their research.
- Articulate and employ, in their writing, a developed methodological process.

Requirements and Assessment Standards:

- The UG-1 writing seminars are designed to be taken sequentially; as a prerequisite for taking the second semester UG-1 writing seminar, students must pass the first semester seminar.
- Students will produce a minimum of 15 pages of writing during their first semester and a minimum of 20 pages during their second semester of UG-1 writing.
- Writing seminar faculty will evaluate students on the basis of an end-of-semester portfolio using an assessment rubric based on course learning objectives. Grading of individual papers is done holistically, but shared standards to be used by all WSEM faculty in assessing student papers are as follows:
  - Clarity and accuracy of **paraphrasing** and ability to **synthesize** ideas in multiple sources (roughly 10% of the final grade).
  - Originality of **claim statements** and ability to **qualify** claims (roughly 20% of the final grade).
  - Sophistication and relevancy of **evidence use** and level of **academic research** (roughly 20% of the final grade).
  - Development of claims through **analysis** and answers to relevant **counterarguments** (roughly 20% of the final grade).
  - **Clarity, conciseness, and fluency** of language used in the essay (roughly 10% of the final grade).
  - Correct use of **APA citation style** for in-text and end citations (roughly 10% of the final grade).
  - Thoughtfulness of **participation** in class discussions and peer workshops (roughly 10% of the final grade).



The University provides each student with a sample Degree Plan to enable them to visualize the course sequence, possible options and the most time-efficient manner of compiling their Individual Study Plan.

All students will be assigned an Academic Advisor from among the undergraduate faculty with whom they can develop their Individual Study Plan. This Plan is a mandatory requirement for all students entering the undergraduate program

## Science Majors

### Bioinformatics

#### **Mission Statement:**

The mission of the Bioinformatics Program is to train and empower students to gain fundamental knowledge in the interdisciplinary field of Computer Science, Statistics, Mathematics, Chemistry, Physics, Public Health, and Environmental science, which is required to design and implement novel methods and tools to provide a better understanding of biological systems.

#### **Program Objectives:**

Bioinformatics, a highly interdisciplinary field, has evolved as a powerful modern science. Bioinformatics will serve as a good substitute for all the natural science majors (Biology, Chemistry, Computer Science, Physics, and Mathematics) as it is very interdisciplinary. Bioinformatics requirements will offer students the breadth of various AUW core courses and the depth in the area of specific Bioinformatics field enabling students to communicate across the disciplines, to think critically, analytically and creatively, and to solve relevant problems in the field. There is a great demand for undergraduate and graduate-level trained Bioinformatician both in the industry and in the academia. Therefore, Bioinformatics major at AUW fits well within the AUW Curriculum and existing programs to fulfill the goal of a liberal arts and science institution as mentioned in AUW's Charter and mission statement.

#### **Learning Outcomes:**

Upon completion of the major the students will be able to:

- Gain basic interdisciplinary knowledge in various fields of science in particular biological systems.
- Develop and implement computer programs that will enable efficient access to, use and management of, various types of life science data. High-level computer programming, Data structures and algorithms, and Database design knowledge will assist the students modeling real world biological data with the consideration of constraints which would significantly improve students' computational techniques.
- Solve formal and practical problems arising from management and analysis of biological data.
- Acquire a comprehensive picture of how normal cellular activities are altered in different disease states.
- Understand the organizational principles within nucleic acid and protein sequences.
- Use of existing bioinformatics tools and databases to carry out sequence alignment, gene finding, genome assembly, drug design, drug discovery, protein structure alignment, protein structure prediction, prediction of gene expression and protein-protein

interactions, genome-wide association studies, modeling of evolution and cell division/mitosis.

- Understand how to utilize the knowledge of emerging technologies in human health, drug industries, preventive medicine, agriculture, and environmental sustainability.

### **Career Opportunities:**

There are various types of career opportunities for Bioinformatics graduates, such as Scientific Curator, Sequence Analyst, Gene Analyst, Protein Analyst, DNA Chips data Analyst, Phylogeneticist, Research Scientist, Database Programmer, Bioinformatics Software Developer, Computational Biologist, System Biologist, Network Administrator/Analyst, Structural Analyst, Molecular Modeler, Bio-statistician, Biomechanics, Cheminformatician, Pharmacogenetician, Pharmacogenomics etc.

In addition to gaining admission into graduate school in Bioinformatics, Biotechnology, Computational Biology, Genomics, Metagenomics, Proteomics, students can get job opportunities in all sectors of biotechnology, pharmaceutical and biomedical sciences, in research institutions, hospitals and industry. Some of the specific career areas that fall within the scope of bioinformatics include Sequence assembly, Database design and maintenance, Sequence analysis, etc.

### **Program Requirements:**

Bachelor of Science (B.Sc.) degree Bioinformatics program requires a total of at least 120 credits to complete.

- **Liberal Arts & Sciences Core curriculum:**      **11 courses = 44 credits**
- **Natural Science courses:**                              **3 courses = 12 credits**
- **Bioinformatics Core courses:**                              **7 courses = 28 credits**
- **Bioinformatics Elective courses**                              **6 courses = 24 credits**
- **Independent Studies**    **1 course = 4 credits**
- **General Electives**    **2 courses = 4 credits**

**\*Note: Courses with labs count for 5 credits.**

### **Courses:**

#### **Liberal Arts & Sciences Courses (11 courses)**

|    |   |
|----|---|
| 1. | Social analysis (SOCA)                              |
| 2. | Ethical Reasoning (ETHR)                            |
| 3. | Literature, Civilization Studies & Arts I (LCSA-I)  |
| 4. | Literature, Civilization Studies & Arts I (LCSA-II) |
| 5. | Writing Seminar I (WS-I)                            |
| 6. | Writing Seminar II (WS-II)                          |

|     |  |
|-----|--|
| 7.  | Probability & Statistics (Prob & stat)             |
| 8.  | Calculus-I (Cal-I)                                 |
| 9.  | Computing & Programming (CS-50)                    |
| 10. | *Natural Science-I -Biology I (Bio-I)              |
| 11. | *Natural Science-II -Chemistry (General Chemistry) |

**\*For Social Science Students: At least 2 out of Physics-I, Chemistry-I and Biology-I.**  
**Basic Sciences for Bioinformatics (3 courses)**

|    |                     |
|----|---------------------|
| 1. | General Physics     |
| 2. | Organic Chemistry   |
| 3. | Biology II (Bio-II) |

**Major Requirements for Bioinformatics (7 courses)**

|    |  |
|----|--|
| 1. | Introduction to Bioinformatics (Into to BINF)          |
| 2. | Database Management Systems and Web Application (DBMS) |
| 3. | Advanced Bioinformatics with Programing (Adv BINF)     |
| 4. | Cellular and Molecular Biotechnology (Cell & Mol)      |
| 5. | Genomics and Proteomics (Gen & Prot)                   |
| 6. | Biochemistry (Biochem)                                 |
| 7. | Senior Thesis/Seminar                                  |

The minimum passing grade for the Bioinformatics major courses is C-.

**\* Bioinformatics Electives courses (BINF Elec) chosen with consent of adviser-minimum 1 from each of the section below: (6 courses)**

| Biological Sciences track for Bioinformatics  | Computer Sciences track courses for Bioinformatics  | Mathematics track courses for Bioinformatics   |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Bioinformatics Data Analysis</li> <li>• Introduction to Biotechnology and Genetic Engineering</li> <li>• Computational Drug Discovery</li> <li>• Nutrigenetics</li> <li>• Protein Structure and Modeling</li> <li>• Introduction to Public Health</li> <li>• Introduction to Epidemiology</li> </ul> | <ul style="list-style-type: none"> <li>• Object Oriented Programming</li> <li>• Data Structures and Algorithms</li> <li>• Artificial Intelligence (AI)</li> <li>• Software Engineering and Mobile Apps Development</li> <li>• Computer Communications Networks</li> </ul> | <ul style="list-style-type: none"> <li>• Calculus II</li> <li>• Linear Algebra</li> <li>• Discrete Mathematics</li> <li>• Numerical Analysis and Computing</li> <li>• Operations Research</li> <li>• Differential Equations</li> </ul> |

|  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>• Principles of Biostatistics</li> <li>• Infectious and Tropical Diseases Epidemiology</li> <li>• Introduction to Environmental Health</li> <li>• Environmental Microbiology</li> <li>• Ecology</li> <li>• Global Climate Change</li> <li>• GIS &amp; Remote Sensing</li> </ul> | <ul style="list-style-type: none"> <li>• Computer and Network Security</li> <li>• Machine Learning</li> </ul> |  |
|--|---|--|

**\*At Any given semester 3-5 electives will be offered.**

### **Independent Studies (1)**

### **General Electives-2 (Gen Elec) courses chosen with consent of adviser (2 courses)**

#### **Time Frame:**

Students usually are required to complete the program within three academic years (UG1, UG2 and UG3). One academic year consists of Summer, Fall and Spring terms.

Students are not required to complete all the core courses during first year (UG1). Natural science (UG1) and basic science courses (UG1 and UG2) are the foundation for major courses in Bioinformatics major. During degree plan, students will follow advisor's suggestion to design the distribution of core, natural science, basic science, major and elective courses in three academic years.

Bioinformatics students are recommended to follow the following course layout\*:

| <b>UG1</b>    |                   |            |                    |             |
|---------------|-------------------|------------|--------------------|-------------|
| <b>Summer</b> | Cal-I/Prob & Stat |            | ETHR/SOCA/LCSA-I   |             |
| <b>Fall</b>   | Bio-I             | Chem-1     | Cal-I/ Prob & Stat | WS-I        |
| <b>Spring</b> | Bio-II            | Orgo-I     | CS-50              | WS-II       |
| <b>UG2</b>    |                   |            |                    |             |
| <b>Summer</b> | ETHR/SOCA/LCSA-I  | DBMS       |                    |             |
| <b>Fall</b>   | Intro to BINF     | Gen & Prot | ETHR/SOCA/LCSA-I   | BINF Elec-1 |

|               |            |                       |                     |             |
|---------------|------------|-----------------------|---------------------|-------------|
|               |            |                       |                     |             |
| <b>Spring</b> | Adv BINF   | Cell & Mol            | BINF Elec-2         | BINF Elec-3 |
| <b>UG3</b>    |            |                       |                     |             |
| <b>Summer</b> | LCSA-II    | Phy-I                 | Internship-Optional |             |
| <b>Fall</b>   | Gen Elec-1 | Senior Thesis/Seminar | BINF Elec-4         | BINF Elec-5 |
| <b>Spring</b> | Biochem    | BINF Elec-6           | Independent Studies | Gen Elec-2  |

\*This course layout may change according to the course offering per semester and special situation.

Reference:

URL: <https://www.iscb.org/curriculum-guidelines-colleges-universities>

## Environmental Sciences

(Major and Minor)

### Mission Statement

The Environmental Sciences (ES) undergraduate degree at AUW provides a broad-based curriculum with a strong emphasis on basic science to understand nature's physical, chemical and biological systems. This program within the liberal education framework provides the foundation for recognizing, assessing, and solving environmental problems at the local, regional, and global scale in a sustainable way. Graduates with this interdisciplinary background gain the means to become informed, responsible, active citizens, and leaders.

### Learning Objectives

- Environmental Sciences deals with diverse issues arising from the impact of human activities on natural systems. To address these problems, students are trained to apply acquired knowledge, tools and techniques from a variety of disciplines, such as biology, ecology, chemistry, toxicology, geology, hydrology, atmospheric science, engineering, statistics, and management. Overall, students completing this program will be able to:
- Develop a broad, interdisciplinary framework for approaching complex, interconnected environmental problems we are facing;
- Develop strong analytic and quantitative skills needed to identify, design & conduct experiment, analyze and interpret data, and reach independent conclusions;

- Develop a rigorous scientific base across multiple disciplines (social, biological, and physical sciences) but with a strong concentration in one area so as to develop the depth of expertise in that field;
- Communicate their findings to the scientific community, government agencies, non-government environmental organizations, and the public effectively (orally, in writing, and through electronic media). Understand professional, ethical responsibilities, contemporary environmental science issues and the impact of environmental science in a global, regional and societal context;
- Understand the need, and have the ability, to engage in lifelong learning and function effectively as a leader in the environmental field.

### **Program Outcomes**

1. Gain in-depth knowledge on various elements of environmental sciences and its usefulness in society,
2. Acquire and apply scientific knowledge about environmental issues to understand the underlying scientific concepts
3. Acquire the necessary problem-solving skills that would enable students to obtain and propose alternatives to a variety of environmental problems,
4. Understand the multidisciplinary approaches in improving environmental and ecological health conditions.
5. Develop the capacity to become global environmental leaders in research, development, and implementation (e.g., policies, programs).
6. Understand the environmental sciences' challenges through participatory teaching and learning methods to achieve the Sustainable Development Goals (SDGs).
7. Use of existing tools and methods to carry out a range of environmental assessments.
8. Understand and discuss the various dimensions of major environmental challenges such as climate change, biodiversity loss, natural resource degradation, water and sanitation hazards, natural disasters, pollution (air, water, and soil), and their potential integrated and sustainable solutions.

### **Career Opportunities**

- As ES is a multidisciplinary program, ES graduates can work in diverse fields such as educational and research institutions, government agencies, corporate sector, industries, consultancies, development sector, UN agencies, think tanks. Below are some of the list of career opportunities
- Environmental consultant, Environmental education officer, Environmental engineer, Environmental manager, Marine biologist, environmental managers, Environmental Policy Analyst, Nature conservation officer, Recycling officer, Sustainability consultant, Waste management officer, Water quality scientist, Environmental health practitioner, Ecologist, Toxicologist, Environmental Development Officials (local, national and international NGOs), Government agencies (e.g. environment, water resources, urban planning, conservation, and energy)

## Justification of the Curriculum Revision of 2020-2021 Academic Year

- The Institution of Environmental Sciences (IES), through its education committee, the Committee of Heads of Environmental Sciences (CHES), offers professional accreditation to CHES members for Masters, Honors and Foundation Programs. We need to develop our AUW Environmental Sciences program that can allow us to apply for higher education accreditation. Therefore, the criteria and components of the subject of **Quality Assurance Agency (QAA)** for Higher Education in the UK has been followed to revise this curriculum. The detailed information of the accreditation can be found at the following link: <https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-earth-sciences-environmental-sciences-and-environmental-studies.pdf>
- We have realized that some major courses such as global climate change, environmental policy (currently offered as – Environmental Science and Policymaking), Waste Management, Environmental Management, and research methods in ES, which are very important for the program students, are not included in the ES major courses and foundational course requirement.
- As it is a Bachelor of Science (B.Sc.) in Environmental Sciences, it is essential to keep all main science courses that we think are very important for Environmental Science major students to get the key ideas. They can connect these ideas with the major-related techniques and can apply them in real-life situations. This fundamental knowledge of science will help them use their careers through graduate programs, jobs, research, and other real-life applications. However, as mentioned earlier, some advanced-level science courses have been replaced with the essential major-related courses to provide requisite competencies by following the domain areas.

Students usually are required to complete the program within three academic years. One academic year consists of Fall, Summer, and Spring terms. In ideal situations, an Environmental Sciences student will follow the course timeframe presented below:

The first year is allocated to Liberal Arts Sciences courses. Students are required to complete a total of 11 core courses. The following two years (UG2 and UG3) are allocated for Science and ES fundamental, ES major, and ES elective courses. During the second year BSc in Environmental Sciences students complete seven Science and ES fundamental courses and two ES major courses. During the final year BSc in Environmental Sciences students complete the remaining six major courses, three ES elective courses, and Senior Thesis/Capstone

## Program Requirements

Environmental Sciences (B.Sc.) program requires a total of 120 credits to complete.

|  |              |            |
|--|--------------|------------|
| Liberal Arts & Sciences Core curriculum: | 11 courses = | 44 credits |
| ES Foundational Courses:                 | 7 courses =  | 28 credits |
| ES Major courses:                        | 7 courses =  | 28 credits |
| ES Elective courses:                     | 4 courses =  | 16 credits |
| Research/Thesis/Capstone                 | 1 course =   | 4 credit   |



**Note: Courses with labs count for 5 credits.**

## Domain Areas

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### A. Core Liberal Arts & Sciences Domain Areas

1. Knowledge on the scientific foundations of physical and natural world.
2. Knowledge and skills on scientific reasoning and critical thinking.
3. Knowledge of cultural, political, social, anthropological foundation of environment.
4. Understanding of personal and social responsibility and ethical reasoning.
5. Knowledge and skills on integrative and applied learning.
6. Understanding and appreciation for diversity, inclusiveness, and teamwork.

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### B. Environmental Sciences Broad Subject Domain and Courses

1. Water, Air and Soil: Water Management; Introduction to Environmental Sciences, Geology
2. Climate Science and Energy: Global Climate Change; Energy and the Environment
3. Biodiversity, Conservation, and Sustainability: Ecology; Sustainability Sciences
4. Chemical, Life Science and Health: Environmental Health; Environmental and Chemical Toxicology, Environmental Microbiology
5. Geo-Spatial Analysis: Geology; GIS

## Competencies

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### A. Environmental Sciences Program Competencies\*

#### 1. Intellectual skills (knowledge and understanding)

- a. Knowledge and understanding of subject-specific theories, paradigms, concepts and principles.
- b. An ability to integrate evidence from a range of sources to test findings and hypotheses.
- c. An ability to consider issues from a range of interdisciplinary and multidisciplinary perspectives.
- d. An ability to analyze, synthesize, summarize, and critically evaluate information.
- e. An ability to define complex problems and to develop and evaluate possible solutions.
- f. A critical approach to academic literature, data, and other sources of information.

#### 2. Practical skills

- a. Conduct fieldwork and laboratory investigations competently (as appropriate)
- b. Describe and record observations in the field and laboratory.
- c. Interpret and evaluate practical results in a logical manner.
- d. Undertake laboratory and fieldwork ethically and safely.
- e. Plan, conduct and present an independent project with appropriate guidance.

- f. Prepare, manipulate, and interpret data using appropriate techniques.
- g. Use appropriate numerical and statistical techniques.
- h. Use appropriate technologies in addressing problems effectively.

## **2. Communication Skills**

- a. An ability to communicate effectively to a variety of audiences using a range of formats.
- b. Good interpersonal communication skills to enable effective team working.
- c. An ability to argue a case in an effective manner.

## **3. Personal and Professional skills**

- a. Work effectively as a team member.
- b. Recognize and respect the views of others.
- c. Demonstrate an awareness of the importance of risk assessment and relevant legislation.
- d. Develop the skills for autonomous learning.
- e. Identify and work towards targets for personal, career and academic development.
- f. Reflect on the process of learning and to evaluate personal strengths and weaknesses.
- g. Display an appreciation of developing their graduate skills relevant to career pathways.

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## **B. Subject Knowledge Based on Domain**

While it is recognized that courses vary considerably in the depth and specificity to which they treat subjects, it is anticipated that all graduates have appropriate knowledge of the main aspects of the environmental sciences, as listed.

- A holistic approach to study of the complexity and interconnections of the Earth's systems and processes.
- The scientific study of physical, chemical, biological and anthropogenic processes operating on the ecosystems.
- Major environmental processes on scales from global to organismal, and, where appropriate, to the molecular and atomic levels of organization.
- The importance of timescale, from geological to the short term, on the impacts of natural and human-induced activities on the ecosystem.
- The spatial scale, from global to local, of human impacts on the environment and responses to environmental change.
- The nature, organization, complexity, sustainability and interconnections of humans and the ecosystems.
- A scientific and interdisciplinary approach to identifying, understanding and managing the Earth's processes and the ecosystem.
- The principles of energy consumption, resource extraction and waste disposal arising from the fulfilment of human needs

Monitoring, modelling and managing natural and human-induced environmental changes and behavior.

- The principles of sustainability and the use of sustainable approaches to manage the natural cycles.
- Key concepts of environmental instruments, for example, environmental impact assessment, management and policy; risk-based management; environmental engineering approach; sustainability and sustainable development; and precautionary principles.
- The role of institutions, organizations and other stakeholders in managing and regulating the human impact on the environment.
- The role of environmental and sustainability professions in contributing to policy and practice, influencing behavior and delivering positive change to environmental performance.
- Risks presented by a changing environment.
- The use of scientific and technological information and tools to inform decision making processes and environmental management.
- A holistic approach to resolve a broad spectrum of environmental issues and enhance environmental performance.
- The options for remediation of environmental impacts available to human society.

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### C. Typical Components May Include:

- air, land and water pollution
- biodiversity
- biogeochemical cycles
- climate change
- conservation
- ecology
- ecological processes
- energy sources production and use
- environmental engineering
- environmental impact assessment
- environmental limits to economic or population growth
- environmental modelling
- environmental monitoring
- environmental pollution control
- green industry
- human adaptation to climate change
- life cycle analysis
- resource management
- sustainability and sustainable development
- water resource utilization.

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## D. Application May Include:

- Monitoring and remediation of contamination and pollution (for example, contaminated land, air and water)
- Green industries and technologies (efficient resource utilization, reduction in environmental impact)
- Modelling and prediction of environmental impacts at different scales
- Scientific and technological responses to climate change (including conservation of biodiversity, carbon sequestration).

## Courses

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### Liberal Arts & Sciences Core Courses (11 courses)

1. Social analysis (SOCA)
2. Ethical Reasoning (ETHR)
3. Literature, Civilization Studies & Arts I (LCSA-I)
4. Literature, Civilization Studies & Arts II (LCSA-II)
5. Writing Seminar I (WS-I)
6. Writing Seminar II (WS-II)
7. Math (Probability & Statistics)
8. Calculus-I
9. Computing & Programming (CS-50)
10. Natural Science: General Chemistry
11. Natural Science: Biology-1

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### Environmental Sciences Foundational Courses

1. Introduction to the Environmental Sciences (ENVS 1000)

This course is an interdisciplinary introduction to Environmental Sciences as a discipline and as a way of thinking. The course aims at introducing students to the main concepts, issue areas, and cross-cutting disciplines associated with environmental sciences/studies. The subject of this course is the nexus between communities and sustainability, a primary tenet of environmental sciences. Dwelling on different aspects of environmental sciences, we will explore its meanings from application on various real world settings. This course covers environmental challenges and their relations to environmental sustainability. Environmental challenges related to pollution, water resources, energy, global warming & climate change, population and land degradation will be examined under this course. The course is also aimed at showing why it is essential to understand, quantify and embed the environmental dimension at every stage of consideration of agricultural, industrial and economic activity. Further, this course attempts to provide a framework to help understand the dynamic nature of Environmental Sciences and the breadth of information available to help create a strong environmental literacy or awareness.

2. General Physics

Physics I course is designed to introduce the principles of Newtonian mechanics along with thermodynamics at the freshmen level of undergraduate study. The key concepts to be developed throughout the semester are vectors, equations of motions, Newton's laws, conservation laws of energy, momentum, the Work-Energy theorem, gravitation, oscillations, and heat & thermodynamics.

### 3. Organic Chemistry

Organic Chemistry I is focused on the basic concepts of organic Chemistry. The course is designed to provide a fundamental overview of organic chemistry to students interested in pursuing a career in the sciences. Upon successful completion of this class, students will understand the relationship between structure and function of molecules, the major types of carbon compounds, reaction types and mechanisms and synthesis of organic compounds. Nomenclature, structures, chemical and physical properties, applications, basic reaction mechanisms and conversion of functional groups will be discussed. Students learn about the relevance of organic chemistry to their lives and the world around them. It will prepare them to be able to use their knowledge in the applied fields, research and contribute to society. This course is designed in a way so that they relate the lectures with majors/real-life /applied science/Research.

### 4. Biology II

The objective of the course is to provide students with the basic principles and mechanism of evolution, biological diversity, form and function of plants and animal. Mechanism of evolution includes different thoughts and theories of evolution, evolution of population and origin of species. Biodiversity illustrates the major life forms and adaptations of prokaryotes, protists, fungi, plants and animals. Plant form and function covers the structure, growth and developmental features of plants along with food production and transport, soil and nutrition, reproduction and internal signaling. Animal form and function consist animal nutrition, immune System, hormones and the endocrine system, reproduction, development and nervous systems

### 5. Ecology ENVS3003

Ecology is the study of the interactions of organisms with their environment. The aim of this course is to familiarize you with the ecological theory and its application. In this course, we will study the relationships among living organisms and their abiotic environment. Several levels of the ecological organization will be examined. These include the study of different types of populations, communities, and ecosystems. Both aquatic and terrestrial ecosystems will be considered. Topics include population structure and growth, species interaction, energy flow, biogeochemical cycle, succession, and application to current environmental management issues. Specific case studies will be drawn from real-world examples taken from the scientific literature. The practical component of the course will include laboratory exercises, as well as field trips (e.g. forests, rivers).

### 6. Geology

The course aims to give an introduction to the origin of the earth, earth's spheres, composition, and processes of the earth from the core to the surface. The course gives a fundamental introduction to the most significant components of geology. The course provides insight into the structure and composition of the earth and the elements, minerals, and rocks that make up the earth. Further, the course aims to provide information on the deposits and availability of geological resources in the earth's crust. This course involves the study of critical physical characteristics of rocks and minerals, focusing on common igneous, sedimentary, and metamorphic rocks. Students will examine different geological components such as petrology, mineralogy, structural geology, paleontology, and geological resources. Students will also examine the geological system in Asian countries by writing a research concept note. They will listen to lectures and read influential, thought-provoking papers in the field. They will discuss both the lectures and the readings with the instructor. Videos will be used to supplement the lectures and readings. Students are expected to write a field/virtual lab reports/assignments on various geological topics based on different videos, online-lab resources, and/or field visits

### 7. Research Methods in Environmental Sciences

This course aims to provide students with an introduction to the practical and professional skills and methods that are required as an environmental scientist. Research methods include details of the methods used to investigate a wide range of environmental issues. Students will be introduced to the fundamental principles of environmental

research through consideration of philosophy, literature, methodologies and approaches. This will be achieved through lectures, videos/documentaries, workshops, tutorials, field visit, and field course. In addition, students will consider the ways in which science is communicated to different audiences and how social media can be used to enhance skills and the professional profile. Practical activities will be carried out with consideration of their environmental impacts and how these can be minimized.

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## Environmental Sciences Major Courses (7 courses)

### 1. Hydrology or Water Resources Management (HYDRO or WRM)

In this course, students will be introduced to the hydrologic cycle and its major components such as precipitation, evapotranspiration, surface and groundwater flow, storage, and runoff. We will examine a range of factors which significantly influence the global hydrologic cycle. Moreover, students will learn the accounting procedure to analyze the allocation of water among various components of the hydrologic system by using the 'Thornwaite Monthly Water Balance Model.' This course will also explore water management issues and water security challenges around the world, including Asia. Besides, the effects of natural disasters (e.g., floods, cyclones), and human-induced war/conflicts on water resources management systems and services will be examined. Various alternative strategies (e.g., IWRM, ILBM, CB-WRM) will be discussed to tackle those issues and challenges. Moreover, the course will examine in detail several 'Major Water Engineering Projects' in the world (e.g., dams, irrigation). Students will also examine the water management system, services, and policies in Asian countries through writing a research concept note. They will listen to lectures and read influential, thought-provoking papers in the field. They will discuss both the lectures and the readings with the instructor and other interested individuals from all around the world (available online). Videos will be used to supplement the lectures and readings. Students are expected to undertake a research project on water management and write a report on 'transboundary river water management issues diagnosis, including innovative solutions and management approaches.'

### 2. Global Climate Change (ENVS 4004)

Global Climate Change (GCC) is a writing intensive course on climate and climatic changes to provide a thorough understanding of what causes changes in the earth's climate but more importantly the solution sphere. Potential effects and major environmental concerns due to climate change in different regions, from Asia and elsewhere in the world, will be examined. This will also include ecological effects and human dimensions of climate change. At the same time, policies, politics, adaptation and mitigation options that could reduce the impact of climate change will be discussed. In essence, this course provides an introduction to climate change science, impacts, climate mitigation & adaptation, and policy implications.

### 3. Energy and the Environment (ENVS 3002)

Energy and the Environment is a multidisciplinary course designed to contextualize the energy use in the human history extended to the contemporary world. It aims at discussing the environmental problems due to use of energy of different carriers and means of resolving the problems. This course provides an overview on energy technologies for sustainable development. Moreover, this course is an interdisciplinary introduction to Energy and the Environment as a discipline and as a way of thinking. The course aims at introducing students to the main concepts, issue areas, and cross-cutting disciplines associated with energy and environmental studies.

### 4. Environmental Microbiology (ENMIC)

This course is an in depth study of the fundamental concepts of Microbiology and its consequences on the environment. Various microorganisms such as bacteria, viruses, fungi, parasites, and planktons will be investigated.

The importance of microorganisms in public health, disease, environment, and industry will be examined. Modern techniques for Microorganisms manipulation will also be explored.

#### 5. Environmental Chemistry and Toxicology (ECHTOX)

Chemistry is the key to understand most of the environmental phenomenon and the challenges we are facing. The experimental assessment and finding solution to environmental problems also heavily depends on environmental chemistry research. This course aims at building knowledge of chemical principles to study the environment; that includes natural processes, effects of chemicals in the environment, sources and fate of contaminants and pollutants, chemical toxicology, natural resources, climate change, and human influence on the environment through agricultural, industrial and economic activity.

#### 6. Environmental Policy (ENVS 4100)

The aim of this course is to deepen students' understanding of the relationships between environmental science and policy formulation and the issues and challenges that may arise and to develop practical skills in knowledge transfer. The course introduces the potential avenues to link the environmental science, technology and policy arenas in effective ways. The course also intends to help in understanding and solving problems that involve complex, interwoven environmental, social, political, cultural and economic factors. In essence, the course connects environmental science with social science and humanities. This course critically examines various political and policy measures implemented across the globe in response to various environmental challenges.

#### 7. ENVS 4003: Waste Management

The overall aim of this course is to work on reducing both public health and environmental hazards by exploring various waste management concepts and approaches. Waste management includes production, transport, handling, treatment and disposal of wastes (solid and liquid). During the course tenure, the source, composition, and properties of waste will be discussed. The problems and solutions associated with the waste generation and management will be examined. Various principles (e.g. 3R, composting, anaerobic digestion) related to the separation, processing, and transformation technologies of waste will be discussed. The course also covers occupational health hazards related to informal waste recycling (e.g. inclusive waste management) in the Global South and North. Students in this course will develop an in-depth understanding of the current waste management scenarios in the world, and the challenges that professionals in this field must tackle. Students will listen to lectures and read influential, thought-provoking papers in the field. They will discuss both the lectures and the readings with the instructor and other interested individuals from all around the world (available online). Videos will be used to supplement the lectures and readings. Students are expected to undertake a research project on waste management related topics and write a term paper on the selected topic.

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### Environmental Sciences Elective Courses (4 courses from the list below)

- Water, Sanitation and Hygiene (Urban/Global)
- Sustainability Science
- Environmental Management
- GIS & Remote Sensing
- Environmental Health
- Natural Disasters
- Oceanic and Atmospheric Science
- Environmental Hydraulics
- Epidemiology

- Biostatistics/Applied Data Analysis
- Environmental Economics,
- Numerical Analysis and Computing,
- Advanced Physics
- Other courses based on advisor's permission.

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## Environmental Sciences Research/Thesis

Senior Thesis/Capstone in Environmental Sciences (ENVS 4980)

Senior Thesis/Capstone is a demanding but rewarding opportunity for students to make use of the skills and knowledge gained in previous coursework. Class meetings, assignments, and individual meetings are designed to provide students with extensive guidance and feedback in all phases, including constructive criticism on written assignments, and student peer review. Students first refine a thesis/final paper proposal, writing introductory material, designing methods, gathering and analyzing preliminary data. Then they complete data collection and analysis, and writing and revising drafts.

## Time Frame

Students usually are required to complete the program within three academic years. One academic year consists of Fall, Summer, and Spring terms.

Generally, an Environmental Sciences program student will follow the course layout presented below:

The first year (UG1) is allocated to Liberal Arts & Sciences core courses.

The following two years (UG2 & UG3) are allocated for Environmental Sciences major, foundation, and elective courses.

| Academic year & term |  |      |        |        |      |        |        |      |        |
|----------------------|--|------|--------|--------|------|--------|--------|------|--------|
|                      | UG 1   |      |        | UG 2   |      |        | UG 3   |      |        |
| Courses              | Summer                                       | Fall | Spring | Summer | Fall | Spring | Summer | Fall | Spring |
|                      | Liberal Arts & Sciences Courses (11 courses) |      |        |        |      |        |        |      |        |
| SOCA                 |  |      |        |        |      |        |        |      |        |
| ETHR                 |  |      |        |        |      |        |        |      |        |
| LCSA-1               |  |      |        |        |      |        |        |      |        |
| LCSA-2               |  |      |        |        |      |        |        |      |        |
| WS-1                 |  |      |        |        |      |        |        |      |        |
| WS-2                 |  |      |        |        |      |        |        |      |        |



|                  |   |  |  |  |  |  |  |  |  |
|------------------|---|--|--|--|--|--|--|--|--|
| PRBSTAT          |   |  |  |  |  |  |  |  |  |
| CALC-1           |   |  |  |  |  |  |  |  |  |
| CS-50            |   |  |  |  |  |  |  |  |  |
| BIO-1            |   |  |  |  |  |  |  |  |  |
| CHEM-1           |   |  |  |  |  |  |  |  |  |
|                  | Environmental Sciences Foundation Courses (7 courses) |  |  |  |  |  |  |  |  |
| ENVS1000         |   |  |  |  |  |  |  |  |  |
| Phy              |   |  |  |  |  |  |  |  |  |
| BIOL 2           |   |  |  |  |  |  |  |  |  |
| Geo              |   |  |  |  |  |  |  |  |  |
| Ecology          |   |  |  |  |  |  |  |  |  |
| Research Methods |   |  |  |  |  |  |  |  |  |
| Orgo             |   |  |  |  |  |  |  |  |  |
|                  | Environmental Sciences Major Courses (7 courses)      |  |  |  |  |  |  |  |  |
| Water Mng        |   |  |  |  |  |  |  |  |  |
| Energy           |   |  |  |  |  |  |  |  |  |
| Climate          |   |  |  |  |  |  |  |  |  |
| ENV Policy       |   |  |  |  |  |  |  |  |  |
| Toxicology       |   |  |  |  |  |  |  |  |  |
| Env Micro        |   |  |  |  |  |  |  |  |  |
| Waste Mng        |   |  |  |  |  |  |  |  |  |
|                  | Environmental Sciences Elective Courses (4 courses)   |  |  |  |  |  |  |  |  |
| Elective 1       |   |  |  |  |  |  |  |  |  |
| Elective 2       |   |  |  |  |  |  |  |  |  |
| Elective 3       |   |  |  |  |  |  |  |  |  |
| Elective 4       |   |  |  |  |  |  |  |  |  |

|                        | Environmental Sciences Research/Thesis (1 courses) |    |    |   |    |    |   |    |    |
|------------------------|--|----|----|---|----|----|---|----|----|
| Thesis/<br>Research    |  |    |    |   |    |    |   |    |    |
| Credits (120<br>total) | 8  | 16 | 16 | 8 | 16 | 16 | 8 | 16 | 16 |

## Assessment

Mixed-method and competency-based assessment will be applied to maximize the necessary improvement, quality, and academic advancement of the learners. Assessment processes will be exercised to encourage class attendance, active participation in group discussion, assignments, laboratory works, field visits, case studies, group work, presentations, debates, and in-class/take-home exams. Following AUW's policy, concerned course instructors will exercise their autonomy in identifying and applying course-specific assessment. Internal and external quality assurance will be exercised for each course following institutional policy.

## References

1. <https://nature.berkeley.edu/advising/majors/environmental-sciences>
2. <https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-earth-sciences-environmental-sciences-and-environmental-studies.pdf>

## Public Health (Major and Minor)

### Justification for the 2020-2021 Curriculum Review

We have completed the review of the current Public Health curriculum and identified major gaps in the domain areas and competencies for the education standards of BSc in Public Health. We reviewed the 2019-2020 curriculum based on two standard guiding documents:

1. Accreditation Criteria for Standalone Baccalaureate Programs The Council of Education for Public Health (2018), which identifies specified baseline domain areas and competencies of a successful graduate of a BSc in Public Health Program, and
2. The Core Competencies for Public Health Professionals of The Council on Linkages Between Academia and Public Health Practice (2014) specifies domain areas and competencies of a successful Public Health practitioner in the field.

Traditionally, a globally competitive BSc in Public Health Program covers these domain areas and competencies in five sub-disciplines of Public Health education:

- a. Epidemiology

- b. Biostatistics
- c. Environmental Health
- d. Health Policy
- e. Health Behavior

Addition to these, based on the priorities and needs of the target population, Public Health programs include additional disciplines to increase their target domains and augment their students' competencies.

As it is mandated in AUW Liberal Arts & Sciences Core, we strongly believe Reproductive, Maternal & Child Health should be included as an additional core Public Health discipline.

Our review demonstrated that the 2019-2020 curriculum covers only less than 30% of Public Health domain areas and competencies related to Epidemiology and Biostatistics. Other domain areas, at best, left for the elective courses or completely left out of the curriculum. It is not possible to justify the current curriculum as a sufficient or competitive curriculum for BSc in Public Health.

During the curriculum review, we also run an opinion survey among our Public Health students. They clearly indicated that natural sciences courses currently made required in the Public health curriculum such as Chemistry & Organic Chemistry I & II, Physics I & II, Calculus I & II etc. restricting the students to take relevant Public health courses.

However, discussion with AUW Administration revealed that all Liberal Arts & Sciences students are required to take one Math, one Chemistry, one Organic Chemistry, one Physics, and one Biology course to strengthen their core Liberal Arts & Science foundation.

To better prepare our graduates for the job market and further educational opportunities in Public Health, we propose a new curriculum to submit for S&M faculty's review and ITQA Committee's review soon. We plan to initiate the new curriculum by the Fall 2021.

## Mission Statement

Through blended, student-centered learning, to train future public health leaders who can identify and address public health challenges and strive to improve public health, eliminate health disparities by providing sustainable solutions globally.

## Program Requirements

Bachelor of Science (B.Sc.) degree Public Health program requires a total of 120 credits to complete.

|  |              |            |
|--|--------------|------------|
| Liberal Arts & Sciences Core curriculum: | 11 courses = | 44 credits |
| Natural Science courses:                 | 2 courses =  | 8 credits  |
| Public Health Core courses:              | 7 courses =  | 28 credits |
| Public Health Foundation courses         | 5 courses =  | 20 credits |
| Elective courses                         | 3 courses =  | 12 credits |
| Public Health Experiential Learning      | 2 courses =  | 8 credit   |

**Note: Courses with labs count for 5 credits.**

## Domain Areas

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### A. Core Liberal Arts & Sciences Domain Areas

1. Knowledge on the scientific foundations of physical and natural world.
2. Knowledge and skills on scientific reasoning and critical thinking.
3. Knowledge of cultural, political, social, anthropological foundation of health and disease.
4. Understanding of personal and social responsibility and ethical reasoning.
5. Knowledge and skills on integrative and applied learning.
6. Understanding and appreciation for diversity, inclusiveness and teamwork.

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### B. Public Health Program Domain Areas

1. The foundations of biological and life sciences and the concepts of health and disease.
2. The history and philosophy of public health as well as its core values, concepts, and functions across the globe and in society.
3. The concepts of population health, the natural history of disease occurrence, and the major population health issues.
4. The basic concepts, methods, and tools of public health data collection, use, and analysis.
5. Evidence-based, scientific approach to public health practice.
6. The concepts and applications of basic epidemiology and biostatistics to generate evidence-based public health practices.
7. The socioeconomic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities.
8. The concepts of health promotion and health prevention across the life course.
9. The fundamental concepts and features of public health project implementation, including planning, assessment, monitoring & evaluation.
10. The fundamental characteristics of health policy, policy development, the roles, influences, and responsibilities of the different agencies and branches of government, and Public Health Service organizational structures throughout the global health systems.
11. The concepts of ethics in public health research and ethical dimensions of health care.
12. The concepts of health communication, including technical and professional writing and the use of mass media and electronic technology.

## Competencies

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### A. Public Health Program Competencies\*

1. Analytical & Assessment Skills
  - a. Describes factors affecting the health of a community.
  - b. Identifies quantitative and qualitative data and information.

- c. Applies ethical principles in accessing, collecting, analyzing, using, maintaining, and disseminating data and information.
  - d. Selects valid and reliable data.
  - e. Describes public health applications of quantitative and qualitative data.
  - f. Contributes to assessments of community health status and factors influencing health in a community.
  - g. Explains how community health assessments use information about health status, factors influencing health, and assets and resources.
  - h. Describes how evidence is used in decision making.
2. Policy Development & Program Planning Skills
- a. Contributes to public health improvement planning.
  - b. Contributes to the development of public health program planning.
  - c. Describes an organizational strategic plan.
  - d. Contributes to the implementation of an organizational strategic plan.
  - e. Gathers information for evaluating policies, programs, and services.
  - f. Describes the implications of policies, programs, and services.
  - g. Implements policies, programs, and services.
  - h. Explains the importance of evaluations for improving policies, programs, and services.
  - i. Describes how public health informatics is used in developing, implementing, evaluating, and improving policies, programs, and services.
2. Communication Skills
- a. Identifies the health literacy of populations served.
  - b. Communicates in writing and orally with linguistic and cultural proficiency.
  - c. Develops approaches for disseminating public health data and information.
  - d. Conveys data and information to professionals and the public.
  - e. Communicates information to influence behavior change and improve health outcomes.
  - f. Facilitates communication among individuals, groups, and organizations.
  - g. Describes the roles of governmental public health, health care, and other partners in improving the health of a community.
3. Cultural Competency Skills
- a. Describes the concept of diversity as it applies to individuals and communities.
  - b. Describes the ways diversity may influence policies, programs, services, and the health of a community.
  - c. Recognizes the contribution of diverse perspectives in developing, implementing, and evaluating policies, programs, and services that affect the health of a community.
  - d. Recognizes the drivers of inequity stemmed from racial, ethnic, and other socio-cultural gradients.
  - e. Describes the effects of policies, programs, and services on different populations in a community.
4. Community Dimensions of Practice Skills
- a. Describes the programs and services provided by governmental and non-governmental organizations to improve the health of a community.
  - b. Recognizes institutional and community relationships that are affecting health in a community.
  - c. Supports institutional and community relationships that improve health in a community.

- d. Collaborates with community partners to improve health in a community.
- e. Describes the importance of community-based participatory actions and research.

#### 5. Public Health Sciences Skills

- a. Describes the scientific foundation of the field of public health.
- b. Identifies prominent events in the history of public health.
- c. Describes how public health sciences are used in the delivery of public health services.
- d. Retrieves evidence to support decision making.
- e. Recognizes role of validity, reliability, and biases for establishing and interpreting evidence.
- f. Describes evidence used in developing, implementing, evaluating, and improving policies, programs, and services.
- g. Describes the laws, regulations, policies, and procedures for maintaining the integrity, and the ethical conduct of research.
- h. Contributes to the public health evidence base.
- i. Suggests partnerships that may increase the use of evidence in public health practice.

#### 6. Leadership & Systems Skills

- a. Incorporates ethical standards of practice.
- b. Describes public health as part of a larger inter-related system of organizations that influence the health of populations at local, national, and global levels.
- c. Describes the ways public health, health care, and other organizations can work together or individually to impact the health of a community.
- d. Contributes to the development of a vision for a healthy community.
- e. Describes the needs for professional development.
- f. Participates in professional development opportunities.
- g. Describes ways to improve individual and program performance.

\* Adopted from Core Competencies for Public Health Professionals; Council on Linkages Between Academia and Public Health Practice, 2014. [phf.org/core-competencies](http://phf.org/core-competencies)

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## **B. Cross-Cutting Competencies\*\***

1. Protection and promotion of public health
2. Critical thinking and innovation
3. Cultural contexts and population dynamics
4. Ethical decision making
5. Independent work and leadership
6. Community involvement and networking
7. Professionalism
8. Systems thinking
9. Analytical thinking
10. Teamwork and collaboration
11. Effective communication and networking
12. Advocacy and leadership

\*\* Adopted from The Council of Education for Public Health, Undergraduate Public Health Program Competencies, 2018. [ceph.org](http://ceph.org)

## Courses

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### Liberal Arts & Sciences Courses (11 courses)

1. Social analysis (SOCA)
2. Ethical Reasoning (ETHR)
3. Literature, Civilization Studies & Arts I (LCSA-I)
4. Literature, Civilization Studies & Arts II (LCSA-II)
5. Writing Seminar I (WS-I)
6. Writing Seminar II (WS-II)
7. Math (Probability & Statistics)
8. Calculus-I
9. Computing & Programming (CS-50)
10. General Physics
11. General Chemistry

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### Natural Science Courses (2 courses)

1. Biology-I
2. Organic Chemistry

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### Public Health Core Courses (7 courses)

1. **Introduction to Public Health (IPH):** In this introductory course, students will learn about the concept of Public Health, interconnected relationship between individual and population level health, Determinants of Health, and overview of major sub-disciplines of Public Health.
2. **Introduction to Epidemiology (EPI):** As a cornerstone of Public Health, Epidemiology is the study and analysis of the distribution, patterns and determinants of health and disease conditions in defined populations. Students will learn the basic concept and methodologies used in Epidemiology and evidence-based decision making on identifying risk factors for Public Health problems.
3. **Principles of Biostatistics (BIOST):** Different than broader discipline of Statistics, Biostatistics deal with biological and health related data and related Public Health determinants and variables. Students will learn on applications of statistical methods and analyses into Public Health decision making.
4. **Introduction to Environmental Health (ENVHLT):** Over 70 percent of Public Health problems rise from environmental factors. As a cross reference to Environmental Sciences, Introduction to Environmental Health will help students to understand how environment play a major role in Public Health. Students will also discuss sustainable mitigation approaches to major environmental and Public Health problems such climate change.
5. **Social and Behavioral Sciences in Public Health (SOCBHS):** In this course students will learn about individual and community level social and behavioral factors, theories, determinants and their impact to Public Health and health problems. Students further examine the application of behavioral methods in health promotion and prevention.

6. **Reproductive, Maternal & Child Health (RMCH):** Students will examine the most important period of life, between the conception of an embryo and the first five years of a child. This period also includes major milestones of human development such as pregnancy, mother and child nutrition, especially breastfeeding. Students will learn basic human rights, factors and determinants affect reproductive, maternal and child health during this period.
7. **Health Policy & Ethics (HPE):** Students will learn about decision making and health policy development mechanisms, power agents who make Public Health decisions, population level factors and determinants that affect the impact of policy implementation. Students will also discuss ethical policy development and the importance of ethical decision making in Public Health.

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### Public Health Foundation Courses (5 courses)

1. **Applied Biostatistics:** Public health students will work to improve population-wide health outcomes and reduce health inequalities. To succeed in this, they must be able to understand how to create, use and interpret data analysis. Students will use data to understand how a variety of factors (predictors) may be associated with health outcomes, to determine the effectiveness of various interventions. The course will sharpen students' ability to make better health issues decisions by using pertinent statistical techniques in data analytics
2. **Health Communication & Health Promotion (HCHP):** Students will learn how to use effective health communication, including verbal and written strategies to influence and empower individuals, populations, and communities to improve and promote Public Health. Students will also learn communication theories and models to promote positive changes in health attitudes and behaviors.
3. **Research Methods in Public Health (RM):** This course aims to introduce the basic principles of research methods used in public health with an emphasis on application to practice. Students will learn essential research tools to investigate public health issues and problems, to ultimately better inform public health policy and practice with evidence-informed decision making.
4. **Introduction to Global Health (GLBHLT):** This course introduces the knowledge of fundamental public health principles, needs, and challenges from a global perspective. It examines socioeconomic, cultural, and behavioral origins of the global public health issues and solutions.
5. **Infectious and Tropical Diseases Epidemiology (ITDE):** Students will learn knowledge and skills necessary for the application of public health practice to address infectious and tropical diseases, population level impacts and solutions. The course will also cover epidemiological characteristics that can be utilized to develop and evaluate prevention strategies for infectious and tropical diseases.

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### Public Health Elective Courses (3 courses from the list below)

|                            |                                       |
|----------------------------|---------------------------------------|
| • Anthropology & Health    | • Humanitarian Organizations & Health |
| • Applied Data Analysis    | • Introduction to Bioinformatics      |
| • Climate Change & Health  | • Introduction to Gender Studies      |
| • Ecology                  | • Migration & Health                  |
| • Environmental Management | • Nutrigenics                         |



|                                    |                                |
|------------------------------------|--------------------------------|
| • Environmental Microbiology       | • Nutrition                    |
| • Environmental Toxicology         | • Psychology                   |
| • Geographical Information Systems | • Qualitative Research Methods |
| • Global Mental Health             | • Society & Health             |
| • Health Economics                 | • Sustainable Development      |
| • Health Management                | • Water Sanitation & Hygiene   |
| • Health Sociology                 |                                |

## Experiential Learning

Provides opportunities to integrate and apply knowledge, and build skills through community-based experiential activities. Students complete scholarly or applied experience in a Public Health organization or a related entity; the experience is aimed to serve as a foundation for capstone project to the degree program.

1. Practicum
2. Capstone Project

Starting with the UG2, each student will be required to meet with their Public Health advisor to identify their interest area for capstone project. Throughout the year, students will develop their capstone outlines, study plan, and 2500 words concept paper.

During the summer terms, students will have a minimum of 160 hours field practicum. It is recommended that students complete the practical in their home country, with a verified public health organization or related institution relevant to their Capstone topic. The faculty advisor and the Public Health Program Coordinator are responsible in verifying the relevance of the practicum site. During the practicum, students will develop their knowledge and practical experience and start developing the framework for their capstone.

During the fall term, they will write their capstone and present their practicum and capstone activities to other students and faculty.

## Time Frame

Students usually are required to complete the program within three academic years. One academic year consists of Summer, Fall, and Spring terms.

In ideal situations, a Public Health student will follow the course layout presented below:

| Academic year & term |  |      |        |        |      |        |        |      |        |
|----------------------|--|------|--------|--------|------|--------|--------|------|--------|
|                      | UG 1   |      |        | UG 2   |      |        | UG 3   |      |        |
| Courses              | Summer                                       | Fall | Spring | Summer | Fall | Spring | Summer | Fall | Spring |
|                      | Liberal Arts & Sciences Courses (11 courses) |      |        |        |      |        |        |      |        |
| SOCA                 |  |      |        |        |      |        |        |      |        |
| ETHR                 |  |      |        |        |      |        |        |      |        |
| LCSA-1               |  |      |        |        |      |        |        |      |        |
| LCSA-2               |  |      |        |        |      |        |        |      |        |
| WS-1                 |  |      |        |        |      |        |        |      |        |
| WS-2                 |  |      |        |        |      |        |        |      |        |
| PRBSTAT              |  |      |        |        |      |        |        |      |        |
| CALC-1               |  |      |        |        |      |        |        |      |        |
| CS-50                |  |      |        |        |      |        |        |      |        |
| PHY-1                |  |      |        |        |      |        |        |      |        |
| CHEM-1               |  |      |        |        |      |        |        |      |        |
|                      | Natural Science Courses (2 courses)          |      |        |        |      |        |        |      |        |
| BIO-1                |  |      |        |        |      |        |        |      |        |
| ORG CHM-1            |  |      |        |        |      |        |        |      |        |
|                      | Public Health Core Courses (7 courses)       |      |        |        |      |        |        |      |        |
| IPH                  |  |      |        |        |      |        |        |      |        |
| EPI                  |  |      |        |        |      |        |        |      |        |
| BIOSTAT              |  |      |        |        |      |        |        |      |        |
| ENVHLT               |  |      |        |        |      |        |        |      |        |
| SOCBHVS              |  |      |        |        |      |        |        |      |        |
| RMCH                 |  |      |        |        |      |        |        |      |        |
| HPE                  |  |      |        |        |      |        |        |      |        |
|                      | Public Health Foundation Courses (5 courses) |      |        |        |      |        |        |      |        |

|                     |   |    |    |   |    |    |    |    |    |
|---------------------|---|----|----|---|----|----|----|----|----|
| PRGDM               |   |    |    |   |    |    |    |    |    |
| HCHP                |   |    |    |   |    |    |    |    |    |
| RM                  |   |    |    |   |    |    |    |    |    |
| GLBHLT              |   |    |    |   |    |    |    |    |    |
| ITDE                |   |    |    |   |    |    |    |    |    |
|                     | Public Health Elective Courses (3 courses)      |    |    |   |    |    |    |    |    |
| 1                   |   |    |    |   |    |    |    |    |    |
| 2                   |   |    |    |   |    |    |    |    |    |
| 3                   |   |    |    |   |    |    |    |    |    |
|                     | Public Health Experiential Learning (2 courses) |    |    |   |    |    |    |    |    |
| PRCT                |   |    |    |   |    |    |    |    |    |
| CAPST               |   |    |    |   |    |    |    |    |    |
| Credits (120 total) | 8   | 16 | 16 | 8 | 16 | 16 | 12 | 16 | 12 |

The first year (UG1) is allocated to Liberal Arts & Sciences courses. Students are required to complete a total of 10 core courses.

The following two years (UG2 & UG3) are allocated for Public Health core, foundation, and elective courses. Students will also complete the remaining natural sciences and Liberal Arts & Sciences courses. During the second year (UG2) BSc in Public Health students complete six Public Health core courses and two Public Health foundation courses, and one Public Health elective courses.

During the final year (UG3) BSc in Public Health students complete the remaining one core course, three Public Health foundation courses, two Public Health elective course, and Public Health experiential learning, which includes Summer Practicum and Capstone.

## Assessment

Multi-method, competency-based formative and summative assessment will be applied to maximize the necessary improvement, quality, and scholastic advancement of the learners. Assessment processes will be exercised to encourage class attendance, active participation in sessions, quizzes, assignments, case studies, group work, presentations, debates, and in-class exams. Following AUW's policy, concerned course instructors will exercise their autonomy in identifying and applying course-specific assessment. Internal and external quality assurance will be exercised for each course following institutional policy.

## References

1. Accreditation Criteria for Standalone Baccalaureate Programs The Council of Education for Public Health (2018). <https://ceph.org/about/org-info/criteria-procedures-documents/criteria-procedures/> (accessed 28/11/2020)
2. The Core Competencies for Public Health Professionals of The Council on Linkages Between Academia and Public Health Practice (2014). [http://www.phf.org/resourcestools/pages/core\\_public\\_health\\_competencies.aspx](http://www.phf.org/resourcestools/pages/core_public_health_competencies.aspx) (accessed 28/11/2020)

## Bioinformatics-Environmental Sciences

A double major in an undergraduate program enables a student to complete two sets of major requirements before awarding a bachelor's degree. This is becoming a growing trend in many of the academic institutions in the US. It is reported that 30% to 40% of the undergraduates at these institutions are double majors. One of the major reasons for a double major is the general belief that a second major not only gives a student the opportunity to increase knowledge but also an edge in the job market in terms of earnings and competitiveness. Despite double majors being popular in many US institutions, there is no set policy as to the requirements which vary from institution to institution. Double majors at AUW, particularly in Science and Math Program, will enhance students' depth of knowledge in two concentrated areas and also make the majors healthy in terms of student enrollment. Students with a CGPA of 3.0 will be able to declare a double major and complete the necessary requirements in 3 years.

### Core (11)

|     |  |
|-----|--|
| 1.  | SOCA                                   |
| 2.  | ETHR                                   |
| 3.  | LCSA-I                                 |
| 4.  | LCSA-II                                |
| 5.  | WS-I                                   |
| 6.  | WS-II                                  |
| 7.  | Probability & Statistics               |
| 8.  | Calculus-I                             |
| 9.  | CS-50                                  |
| 10. | *Natural Science-I -Biology I          |
| 11. | *Natural Science-II -General Chemistry |

**Science Students: 2 out of Physics-I, Chemistry-I and Biology-I**

**\*\*For Social Science Students: At least 2 out of Physics-I, Chemistry-I and Biology-I.  
Basic Science (3)**

|    |                            |
|----|----------------------------|
| 1. | General Physics            |
| 2. | Organic Chemistry (Orgo I) |
| 3. | Biology II                 |

**Major Requirements-Bioinformatics (6)**

|    |  |
|----|--|
| 1. | Introduction to Bioinformatics   |
| 2. | Database Management Systems and Web Application                            |
| 3. | Advanced Bioinformatics with Programing                                    |
| 4. | Advanced Molecular and Cellular Biotechnology (Cell and Molecular Biology) |
| 5. | Genomics and Proteomics (Genes and Genomes)                                |
| 6. | Biochemistry   |

**Environmental Sciences Major Courses (6)**

|    |  |
|----|--|
| 1. | Introduction to Environmental Sciences |
| 2  | Hydrology or Water Management          |
| 3  | Ecology                                |

|    |  |
|----|--|
| 4. | Energy and Environment                 |
| 5. | Environmental Microbiology             |
| 6. | Environmental Chemistry and Toxicology |

### **Senior Thesis or Seminar**

**Note: Students will conduct their thesis from either Bioinformatics or Environmental Sciences.**

#### **\* Electives-courses chosen with consent of adviser: (4)**

Introduction to Environmental Health

Water, Sanitation and Hygiene

Environmental Policy

Waste Management

Environmental Management

Global Climate Change

GIS & Remote Sensing

Sustainability Science

Bioinformatics Data Analysis

Introduction to Biotechnology and Genetic Engineering  
Computational Drug Discovery

Nutrigenetics

Protein Structure and Modeling

Object Oriented Programming Data  
Structures and Algorithms Artificial  
Intelligence (AI)

Software Engineering and Mobile Apps Development  
Computer Communications Networks

Computer and Network Security  
Machine Learning

Calculus II Linear  
Algebra

Discrete Mathematics

Numerical Analysis and Computing

Operations Research

Differential Equations

**\*At Any given semester 3-5 electives will be offered.**

**\*\*The minimum passing grade for the Bioinformatics major courses is C-.**

**\*\*Note: Courses with labs count for 5 credits.**



## Public Health-Environmental Sciences:

A double major in an undergraduate program enables a student to complete two sets of major requirements before awarding a bachelor's degree. This is becoming a growing trend in many of the academic institutions in the US. It is reported that 30% to 40% of the undergraduates at these institutions are double majors. One of the major reasons for a double major is the general belief that a second major not only gives a student the opportunity to increase knowledge but also an edge in the job market in terms of earnings and competitiveness. Despite double majors being popular in many US institutions, there is no set policy as to the requirements which vary from institution to institution. Double majors at AUW, particularly in Science and Math Program, will enhance students' depth of knowledge in two concentrated areas and also make the majors healthy in terms of student enrollment. Students with a CGPA of 3.0 will be able to declare a double major and complete the necessary requirements in 3 years.

### Core (11)

|         |  |
|---------|--|
| 1.      | SOCA                                   |
| 2.      | ETHR                                   |
| 3.      | LCSA-I                                 |
| 4.      | LCSA-II                                |
| 5.      | WS-I                                   |
| 6.      | WS-II                                  |
| 7.      | Probability & Statistics               |
| 8.      | Calculus-I                             |
| 9.      | CS-50                                  |
| 10<br>. | *Natural Science-I -Biology I          |
| 11<br>. | *Natural Science-II -General Chemistry |

**Science Students: 2 out of Physics-I, Chemistry-I and Biology-I**

**\*\*For Social Science Students: At least 2 out of Physics-I, Chemistry-I and Biology-I.**

**Basic Science (3)**

|    |                            |
|----|----------------------------|
| 1. | General Physics            |
| 2. | Organic Chemistry (Orgo I) |
| 3. | Biology II                 |

**Public Health-Core Courses (8)**

|    |   |
|----|---|
| 1. | Introduction to Public Health (IPH)                       |
| 2. | Introduction to Epidemiology (EPI)                        |
| 3. | Principles of Biostatistics (BIOSTAT)                     |
| 4. | Introduction to Environmental Health (ENVHLT)             |
| 5. | Social and Behavioral Sciences in Public Health (SOCBHVS) |
| 6. | Reproductive, Maternal & Child Health (RMCH)              |
| 7. | Health Policy & Ethics (HPE)                              |
| 8  | Public Health Experiential Learning                       |

**Environmental Sciences Major Courses (7)**

|    |  |
|----|--|
| 1. | Introduction to Environmental Sciences |
| 2  | Hydrology or Water Management          |

|    |  |
|----|--|
| 3  | Ecology                                |
| 4. | Energy and Environment                 |
| 5. | Environmental Microbiology             |
| 6. | Environmental Chemistry and Toxicology |
| 7  | Senior Seminar or Thesis in ES         |

**Note: Students will conduct their thesis/experiential learning from either Public Health or Environmental Sciences.**

**\* Electives-courses chosen with consent of adviser: (4)**

Water, Sanitation and Hygiene  
Environmental Policy  
Waste Management  
Environmental Management  
Global Climate Change  
GIS & Remote Sensing  
Introduction to Global Health  
Nutrigenetics  
Research Methods in Public Health  
Anthropology  
Global Mental Health  
Health Economics Migration  
and Health  
Infectious and Tropical Diseases Epidemiology  
Water, Sanitation and Hygiene  
Ecology  
Sustainability Science  
GIS & Remote Sensing  
Data Analysis with R

**\*At Any given semester 3-5 electives will be offered.**

**\*\*The minimum passing grade for the Bioinformatics major courses is C-.**

**\*\*Note: Courses with labs count for 5 credits.**

## Bioinformatics-Public Health:

A double major in an undergraduate program enables a student to complete two sets of major requirements before awarding a bachelor's degree. This is becoming a growing trend in many of the academic institutions in the US. It is reported that 30% to 40% of the undergraduates at these institutions are double majors. One of the major reasons for a double major is the general belief that a second major not only gives a student the opportunity to increase knowledge but also an edge in the job market in terms of earnings and competitiveness. Despite double majors being popular in many US institutions, there is no set policy as to the requirements which vary from institution to institution. Double majors at AUW, particularly in Science and Math Program, will enhance students' depth of knowledge in two concentrated areas and also make the majors healthy in terms of student enrollment. Students with a CGPA of 3.0 will be able to declare a double major and complete the necessary requirements in 3 years.

### Core (11)

|         |  |
|---------|--|
| 1.      | SOCA                                   |
| 2.      | ETHR                                   |
| 3.      | LCSA-I                                 |
| 4.      | LCSA-II                                |
| 5.      | WS-I                                   |
| 6.      | WS-II                                  |
| 7.      | Probability & Statistics               |
| 8.      | Calculus-I                             |
| 9.      | CS-50                                  |
| 10<br>. | *Natural Science-I -Biology I          |
| 11<br>. | *Natural Science-II -General Chemistry |

**Science Students: 2 out of Physics-I, Chemistry-I and Biology-I**

**\*\*For Social Science Students: At least 2 out of Physics-I, Chemistry-I and Biology-I.**

**Basic Science (3)**

|    |                            |
|----|----------------------------|
| 1. | General Physics            |
| 2. | Organic Chemistry (Orgo I) |
| 3. | Biology II                 |

**Major Requirements-Bioinformatics (8)**

|    |  |
|----|--|
| 1. | Introduction to Bioinformatics   |
| 2. | Database Management Systems and Web Application                            |
| 3. | Advanced Bioinformatics with Programing                                    |
| 4. | Advanced Molecular and Cellular Biotechnology (Cell and Molecular Biology) |
| 5. | Genomics and Proteomics (Genes and Genomes)                                |
| 6. | Biochemistry   |
| 7. | Senior Thesis/Seminar  |

**Public Health-Core Courses (7)**

|    |   |
|----|---|
| 1. | Introduction to Public Health (IPH)           |
| 2. | Introduction to Epidemiology (EPI)            |
| 3. | Principles of Biostatistics (BIOSTAT)         |
| 4. | Introduction to Environmental Health (ENVHLT) |

|    |   |
|----|---|
| 5. | Social and Behavioral Sciences in Public Health (SOCBHVS) |
| 6. | Reproductive, Maternal & Child Health (RMCH)              |
| 7. | Health Policy & Ethics (HPE)                              |
| 8  | Public Health Experiential Learning                       |

**Note: Students will conduct their thesis/experiential learning from either Bioinformatics or Public Health.**

**\* Electives-courses chosen with consent of adviser: (4)**

Bioinformatics Data Analysis

Introduction to Biotechnology and Genetic Engineering  
Computational Drug Discovery

Nutrigenetics

Protein Structure and Modeling

Infectious and Tropical Diseases Epidemiology

Introduction to Global Health

Research Methods in Public Health

Data analysis with R

Object Oriented Programming Data  
Structures and Algorithms Artificial  
Intelligence (AI)

Software Engineering and Mobile Apps Development  
Computer Communications Networks

Computer and Network Security  
Machine Learning

Calculus II Linear  
Algebra

Discrete Mathematics

Numerical Analysis and Computing

Operations Research

Differential Equations

Environmental Microbiology

Ecology

Sustainability Science

Global Climate Change

GIS & Remote Sensing

Water, Sanitation and Hygiene

**\*At Any given semester 3-5 electives will be offered.**

**\*\*The minimum passing grade for the Bioinformatics major courses is C-.**

**\*\*Note: Courses with labs count for 5 credits.**

## Social Science Majors

### Economics

#### (Major and Minor)

#### Mission Statement

The primary objective of the Economics major is to provide undergraduate liberal arts students with a rigorous, in-depth, broad, and critical program in theoretical and empirical economics. In order to achieve this aim, our curriculum provides a solid grounding in neoclassical theory, statistical and econometric methods, and their applications in the various fields of economics. This training helps students think critically about the economic issues they confront in their everyday lives. It fosters the development of necessary skills that enable our diverse student body to actively engage in a gamut of policy issues in local, national, and global communities; and compare and contrast alternative methodologies in assessing the broader social and political consequences of various economic doctrines.

#### Learning Goals

The core program goals is to ensure our students possess a basic knowledge of microeconomics concepts such as supply and demand, consumer decision making, elasticity, costs, market structure, and labor markets; and a basic knowledge of macroeconomics concepts including national income accounting, inflation, unemployment, and monetary and fiscal policy.

Other important learning goals are the following:

- To apply the general concepts learned from economic theory and methods, to particular fields of economics.
- To analyze and explain the current economic events in the local and global communities under the framework of economic theory.
- To demonstrate an ability to generate and interpret descriptive statistics.
- To articulate an economic hypotheses and interpret econometric tests of the hypothesis and explain the results and policy implications.
- To explain and evaluate the relevant benefits and costs that need to be considered when comparing decision options and policy choices.
- To effectively communicate, in oral and written form, basic economic concepts, analytical methods and policy choices.

#### Major Requirements

Students need a total of 14 courses for completion of the major.

Students must take the following two courses, preferably in the first year of UG. These courses can be counted as part of their Core Curriculum:

Calculus I

Probability & Statistics



All economics majors are required to successfully complete the following six courses:

Principles of Microeconomics  
Principles of Macroeconomics  
Intermediate Microeconomics

Intermediate Macroeconomics  
Introduction to Econometrics  
Research Methods

They also need to complete six elective courses from the following:

Labor Economics  
Public Finance  
History of Economic  
Thoughts  
Time Series Econometrics  
Managerial Economics  
Economics of Inequality  
Growth and Economic  
Development  
International Trade  
Environmental Economics  
Industrial Organization  
Monetary Economics  
Financial Economics  
Advanced Econometrics  
Economics of Money,  
Banking and Financial Market  
International Finance  
Health Economics  
Introduction to  
Mathematical Economics  
Advanced Mathematical  
Economics  
International Political  
Economy  
Introduction to Game theory  
Microeconomics of  
Development  
Senior Thesis/Capstone

## **Politics, Philosophy and Economics**

### **Mission Statement**

Politics, Philosophy, and Economics (PPE) majors learn the skills necessary to lead teams addressing the most pressing challenges that face our planet, whether through NGOs, academia, businesses, journalism or the public sector. Students learn to think together with others, using multiple perspectives. They quickly identify and respond to institutional or individual biases and preconceptions; they have reasoning abilities that transcend disciplinary boundaries; they enjoy collaborating with people from different professional backgrounds, and they are nimble across rapidly changing environments. We foster rigorous understanding of philosophy, politics and economics—three key disciplines in the social science—but our students will also develop a deep focus in one of two tracks: Human Rights, Law and Policy, and Asia-Pacific Studies. Graduates from this program will be powerfully flexible in their ability to bring critical thinking, cogent writing, fine-grained analysis, and strong speaking skills to a variety of fields, with continuing growth potential provided by their basic skills throughout their careers. The PPE program aims to produce critical and principled thinkers who are also effective global citizens, able to think deeply and contribute meaningfully in their lives and to their communities.

### **Learning Outcomes**

Students should be able to do the following:

- Demonstrate an understanding of the main theories and concepts of politics, philosophy, and economics.
- Demonstrate the ability to use these theories and concepts to analyze contemporary global issues.
- Demonstrate excellent speaking, researching, reading and writing.
- Demonstrate the ability to think critically
- Demonstrate the capacity to undertake interdisciplinary research and writing
- Demonstrate the intellectual and social skills needed to undertake collaborative research and writing
- Demonstrate an understanding of the ethical implications of individual and collective action

### **The Degree Plan**

Students wishing to major in PPE will be required to take a total of 14 courses (including capstone). Of these, nine (9) are common to all PPE majors: the eight (8) required courses and the capstone. The remaining five (5) courses take the student along a track that develops particular expertise. For those students undertaking a Minor, these courses also allow them to develop the interdisciplinary and lateral thinking skills—both intellectual and social—that PPE graduates cherish.

### **Basic PPE Courses**

The 8 required courses are designed to give a PPE graduate the skills and competencies they will need for postgraduate study or employment. These skills are distributed across four areas: philosophy, politics, economics, and research methods.

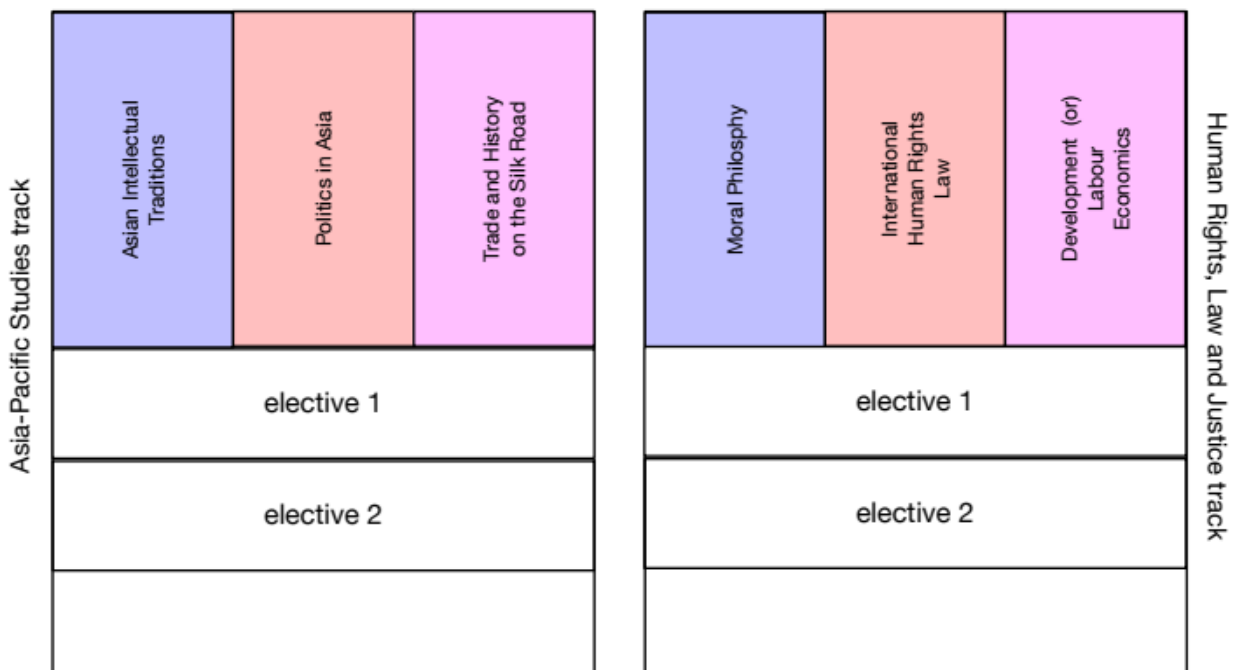
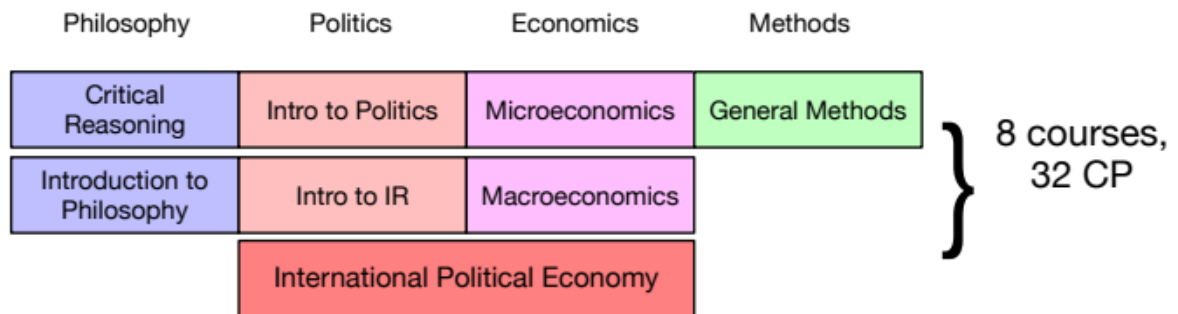
### **Major Electives**

The next 5 courses orient the student to one of two tracks, 'Human Rights, Law and Politics' or 'Asia-Pacific Studies'. Each track continues to develop the core PPE skills within the context of more focused study. There are three required courses within each track, developing skills in philosophy, politics and economics respectively. This is followed by at least two electives, chosen from a list of PPE courses published each year that specify each course as belonging to the HRLP and/or AP tracks (an example list follows). Many of these electives are cross-listed with minor programs, allowing the student to work towards a strong and balanced minor.

### **Integration of Skills**

Finally, students will take part in a capstone seminar. This seminar is required for all graduating PPE students and is also open to students in minor programs. In this seminar, students will integrate their studies across philosophy, politics and economics and hone their research methods skills through short papers presented within a seminar format. By developing, collaborating on, and defending research in an interdisciplinary context, PPE students will leave with practical experience of using the core skills we teach in PPE.

Note: Students with at least a 3.25 GPA may, with permission of the head of PPE and support from their advisor, petition to undertake a research thesis instead.



Capstone seminar (offered both semesters with an alternative of a senior thesis, and offered to students in PPE as well as minors in Gender, Environmental Studies, and Development Studies). Capstone includes a significant *applied methods* component.

}  
6 courses,  
24 CP

Electives for PPE Majors

Courses offered in PPE at the 3000 level or higher will satisfy the requirement of two electives in either the Asia-Pacific (AP) or the Human Rights, Law and Politics (HRLP) tracks. These courses may also fit the other track, and where possible, will be designed to fit with whatever minor programs exist at the time. Industrial and Labor Relations can also count towards HRLP track instead of Labor Economics.

Examples of Elective Courses:

| Course Name  | Track   | Minor(s)                   |
|--|---------|----------------------------|
| PPE3060 Anthropology of Religion                       | AP      |                            |
| PPE 3015 Climate Change Leadership: Power and Politics | HRLP    | Environmental Studies      |
| PPE 3009 Conflict Management & Post-war Development    | HRLP    | Development Studies        |
| PPE 3218 Democratic Theory                             | HRLP    |                            |
| PPE 3300 Leadership, Politics, and Psychology          | HRLP    | Psychology                 |
| PPE 4103 Diplomacy and Statecraft                      | HRLP    |                            |
| PPE 4300 International Leadership                      | HRLP    |                            |
| PPE 3029 Gender Justice and War                        | HRLP    | Gender                     |
| PPE 3040 Gender and Law                                | HRLP    | Gender                     |
| PPE 3041 Global Politics                               | HRLP/AP |                            |
| PPE3059 Encounters: a History of the Secular           | AP      |                            |
| PPE3048 Women in Islam                                 | AP      | Gender, HRLP, Development, |
| Anthropology of Food and Medicine (new)                | AP      | Public Health, Development |
| South Asian Buddhism (new)                             | AP      |                            |
| UN and International Organizations (new)               | HRLP    | Development                |
| Radical Ethical Practices (new)                        | AP/HRLP | Gender                     |
| Political Philosophy                                   | HRLP    |                            |
| Philosophy of Social Sciences                          | HRLP    |                            |
| Epistemology: Western and Asian Perspectives           | AP      |                            |
| Indian Buddhism and Philosophy of Mind                 | AP      | Psychology                 |
| Ecological Anthropology (new)                          | AP      | Environmental Studies      |

## Minors

### Asian Studies

#### Mission Statement

The Asian Studies program at the Asian University for Women trains students to understand and engage in an interconnected world. With foundational and specialized courses in a range of fields, including history, religion, philosophy, literature, anthropology, sociology, politics and international relations, development studies, and language studies, it gives students the knowledge and skills needed to work across disciplines, to tackle issues in the region, and to think contextually and creatively about local, regional, and global transformations.

Asian Studies is innovative and interdisciplinary. While building on the diverse backgrounds and interests of its faculty and students, it invites students to question the implications of taking Asia as a bounded geographic space or field of study. In doing so, the program reflects AUW's focus on promoting women's leadership and confronting regional challenges. Students pursuing Asian Studies major will be equipped to work in a truly global environment.

The program provides students with the theoretical and methodological tools needed to pursue research and study in innovative and interdisciplinary ways. Its coursework provides a framework for developing critical questioning and reasoning skills, as well as capacities in communication, problem solving, and creative thinking. This integrated learning environment also includes regional language study and courses with both regional and extra-regional foci.

#### Learning Outcomes

Development of leadership qualities such as self-awareness and reflexivity, communication, creativity, independent thinking, and problem solving.

Graduates who will be able to:

1. Approach contemporary issues, challenges and developments through an interdisciplinary and creative manner.
2. Demonstrate excellent skills in speaking, close reading, critical thinking, and careful writing.
3. Identify key critical questions and engage in thoughtful debate about texts from a variety of historical and cultural backgrounds both in Asia and in the global context.
4. Connect ideas, theories, and practical applications from a variety of fields in this interdisciplinary major (anthropology, art history, cultural studies, development studies, language, literature, philosophy, politics, religion, and sociology).

5. Integrate insights and understandings from courses to critically reflect on, and make sense of, the ways broader processes, events and moments at global, regional, national and local levels impact on their own lives.

#### **Minor Requirements (5 courses)**

- Two courses must be at 2000 level and one course must be at 3000 level.
- The courses must be from at least 3 of the categories listed above for the major
- For courses that are cross-listed with other majors and Asian Studies, students will receive credit for only one of the cross-listed majors and not all of them. For example, if a course is cross-listed as ASIA/PPE and the student is a PPE major doing an AS minor, the student can get credit for this course either for PPE or ASIA but not both.

### **Biological Sciences**

#### **Mission Statement**

To provide the highest quality education and experience in the biological sciences within the context of a liberal arts education. We prepare students to understand biological issues, be competent in basic methods and techniques of the discipline, and to be accomplished critical thinkers. Our graduates will be prepared to pursue careers in the life sciences and will contribute to the growing scientific capacity in Asia.

#### **Learning Objectives**

- Apply knowledge of basic facts and theories in biological and related sciences.
- Interpret scientific knowledge critically and relate it to other subject areas in the liberal arts.
- Communicate their understanding, both in written and verbal form, to others within and outside the discipline.
- Collaborate effectively in interdisciplinary experimental projects
- Add to the body of biological knowledge through research.
- Conduct ethical science.
- Meet regional and global challenges in the field of biological sciences.

#### **Minor requirements (6 courses)**

- General Biology I, General Biology II, General Chemistry I
- Three 3000 level, four credit point courses, such as Cell and Molecular Biology, Ecology, Genes and Genomics, Human Anatomy and Physiology I, Human Anatomy and Physiology II, Human Form and Function or Environmental Microbiology. 3000 level courses cannot be counted as both major and minor requirements.

The minimum passing grade for courses to fulfill the major/minor requirement is C-. Courses for the major cannot be taken pass /fail.

## **Computer Science / Information & Communication Technology**

### **Mission Statement**

Computer Science (CS)/Information and Communication Technology (ICT) at AUW aims to educate students who aspire to engage in careers in various domains of CS/ICT Industry and Development Sectors. This program leverages technical ingenuity together with social insights across the discipline in order to address challenges in areas such as health, microfinance, entrepreneurship, governance, education, and civic activism. Our program envisions the students to work in multi-disciplinary teams to design, develop, and implement CS/ICT infused services/applications that are technically appropriate and socially viable in the global context, so as to enable true and sustainable adoption for the next billion users worldwide.

### **Learning Objectives**

At a broad level, the expected characteristics of computer science graduates include the following:

- **Technical understanding of computer science:** Graduates should have a mastery of computer science as described by the curriculum.
- **Acquire Knowledge and skills in areas of Computer Science:** Graduates need an understanding of a number of recurring themes, such as abstraction, complexity, and evolutionary change, and a set of general principles. Graduates are expected to use the skills acquired to solve real-life challenges in development sectors such as health, education, agriculture, microfinance, women empowerment.
- **Appreciation of the interplay between theory and practice:** Graduates of a computer science program need to understand how theory and practice influence each other and how they are inter-linked.
- **Problem solving skills:** Graduates need to understand how to apply the knowledge they have gained to solve real problems, not just write code and move bits. They should be able to design and improve a system based on a quantitative and qualitative assessment of its functionality, usability and performance. They should realize that there are multiple solutions to a given problem and that selecting among them is not a purely technical activity, as these solutions will have a real impact on people's lives. Graduates also should be able to communicate their solution to others, including why and how a solution solves the problem and what assumptions were made.
- **Commitment to life-long learning:** Graduates should realize that the computing field advances at a rapid pace, and graduates must possess a solid foundation that allows and encourages them to maintain relevant skills as the field evolves. Specific languages and technology platforms change over time. Therefore, graduates need to realize that they must continue to learn and adapt their



skills throughout their careers. To develop this ability, students should be exposed to multiple programming languages, tools, paradigms, and technologies as well as the fundamental underlying principles throughout their education. In addition, graduates are now expected to manage their own career development and advancement. Graduates seeking career advancement often engage in professional development activities, such as certifications, management training, or obtaining domain specific knowledge.

- **Commitment to professional responsibility:** Graduates should recognize the social, legal, ethical, and cultural issues inherent in the discipline of computing. They must further recognize that social, legal, and ethical standards vary internationally. They should be knowledgeable about the interplay of ethical issues, technical problems, and aesthetic values that play an important part in the development of computing systems. Practitioners must understand their individual and collective responsibility and the possible consequences of failure. They must understand their own limitations as well as the limitations of their tools.
- **Communication and organizational skills:** Graduates should have the ability to make effective presentations to a range of audiences about technical problems and their solutions. This may involve face-to-face, written, or electronic communication. They should be prepared to work effectively as members of teams. Graduates should be able to manage their own learning and development, including managing time, priorities, and progress.
- Awareness of the broad applicability of computing: Platforms range from embedded micro-sensors to high-performance clusters and distributed clouds. Computer applications impact nearly every aspect of modern life. Graduates should understand the full range of opportunities available in computing.
- Acquire Knowledge in technical areas relevant to CS/ICT and be able to use techniques, skills and computing tools necessary to create solutions for real life challenges.
- Develop understanding of, and to solve analytical problems in one or more specializations of CS/IT.
- Perform system level design by the process of modeling, analysis, synthesis and integration of knowledge within CS/IT
- Demonstrate a sense of societal and ethical responsibility in all professional endeavors.
- Exhibit strong communication skills and to function effectively as a team player.

### **CS Minor Requirements (6 courses)**

#### CS Basic Courses (3):

- Introduction to Computing and Programming (CS50) (CSCI 2000)
- Object Oriented Programming (C++/Java/Python) (CSCI 2001)
- Data Structures and Algorithms (CSCI 2003)

#### Advanced Courses (3 out of the list):

- Database Management Systems (CSCI 3001)
- Computer Communications Networks (CSCI 3003)

- Software Engineering and Mobile Apps Development (iOS and Android) (CSCI 3005)
- Artificial Intelligence (AI) (CSCI 4001)
- Computer and Network Security (CSCI 4003)

#### **ICT Minor Requirements (5 courses)**

- Introduction to Computing and Programming (CSCI 2000 )
- ICT for Development: What, Why, and How( RCHA 2001)
- Global Information Society (CSCI 1100)
- Computer Communications Networks (CSCI 3000)
- Internet and Mobile technologies and applications (CSCI 4001)

The minimum passing grade for courses to fulfill the major/minor requirements is a C-.

### **Development Studies**

#### **Mission**

What is development? How has it been practiced, understood and theorized? In Development Studies, students are invited to explore the process, structure and institution of development through a diversity and plurality of perspectives, approaches and models. Recognizing the complexity of issues. Development Studies requires its students to take interdisciplinary courses that encompass, among others, ethical, political, socioeconomic, cultural and historical issues, dimensions and perspectives. Central issues explored in Development Studies will be poverty and urban challenges in the first urban century, while also recognizing the continuing importance of rural and regional development.

#### **Learning Objectives**

- Understand the central paradigms and key concepts in development discourses, theories and practices.
- Acquire the skills of conducting critical, nuanced and constructive analysis, integrative and interdisciplinary thinking.
- Locate development as societal change (from socioeconomic to spatial, political and cultural), as well as the process of trying to direct that change. Therefore, students in Development Studies will understand how development theories and practices have interacted with planning theories and practices in shaping one another.
- Identify and analyze the roles and responsibilities of the different actors and stakeholders in the development project and processes.
- Identify and examine the ethical challenges and dilemmas in development planning and action, including financing development and development aid.

- Analyze the political dynamics, dimensions and debates in development paradigms, practices and processes.

### **Requirements and Guidelines**

- Students have to complete 20 credits (the equivalent of 5 courses) in Development Studies.
- There are two mandatory courses: DEV/SOCA2600 Introduction to Development Studies and DEV/PPE3650 Theories and Practices of Development. Completing DEV/SOCA2600 course is a prerequisite for enrolling DEV/PPE 3650.
- A maximum of one (1) course can be of lower level than 3000, in addition to DEV/SOCA2600.
- A maximum of two (2) courses can count both towards the core and towards the minor (e.g. Regional Challenges).
- A minimum of three (3) courses must be of 3000 level or higher, including DEV/PPE3650.
- The students must have a minimum grade of C- in a course for it to count towards the minor.
- The 3000 level (or higher) courses must be exclusive to the minor and cannot be counted towards another major.
- Apart from the mandatory courses, the DS Minor coordinator/advisor will confirm the list of optional courses (including course levels) that can be counted towards DS minor before the start of each academic semester.

## **Economics**

### **Mission Statement**

The primary objective of the Economics major is to provide undergraduate liberal arts students with a rigorous, in-depth, broad, and critical program in theoretical and empirical economics. Our curriculum provides a solid grounding in neoclassical theory, statistical and econometric methods, and their applications in the various fields of economics. This education at AUW would help students think critically about the economic issues they confront in their everyday lives. It would foster the development of necessary skills that enable our diverse student body to actively engage in a gamut of policy issues in local, national, and global communities; and compare and contrast alternative methodologies in assessing the broader social and political consequences of various economic doctrines.

### **Learning Outcomes**

The core program goal is to ensure our students possess a basic knowledge of microeconomics concepts such as supply and demand, consumer decision making, elasticity, costs, market structure, and labor markets; and a basic knowledge of macroeconomics concepts including national income accounting, inflation, unemployment, and monetary and fiscal policy.

*Other important learning goals are:*

- To apply general concepts learned from economic theory and methods, to particular fields of economics.
- To analyze and explain current economic events in the local and global communities under the framework of economic theory.
- To demonstrate an ability to generate and interpret descriptive statistics.
- To articulate an economic hypotheses and interpret econometric tests of the hypothesis and explain the results and policy implications.
- To explain and evaluate the relevant benefits and costs that needs to be considered when comparing decision options and policy choices.
- To effectively communicate, in oral and written form, basic economic concepts, analytical methods, and policy choices.

#### **Minor Requirement (5 Courses)**

- Students should take Calculus I, preferably in the first two years. This course can be counted as part of their Core Curriculum.
- Calculus I is a pre-requisite for all economics courses. Students must receive a grade of C- or higher in Calculus I to declare Economics as their minor.
- Principles of Microeconomics is a prerequisite for all other economics courses.
- Principles of Macroeconomics is a prerequisite for Intermediate Macroeconomics.
- Students must receive a grade of C- or higher in any course that will count toward the minor.

All students interested in a minor in economics are required to successfully complete the following courses:

- Principles of Microeconomics
- Principles of Macroeconomics
- Intermediate Microeconomics (3000 level)
- Intermediate Macroeconomics (3000 level)

They also need an elective course at 3000 level from the above mentioned elective course list for the major.

## **Environmental Sciences**

### **Mission Statement**

The Environmental Sciences (ES) undergraduate degree at AUW provides a broad-based curriculum with a strong emphasis on basic science to understand the physical, chemical and biological systems of nature. This program within the liberal education framework provides the foundation for recognizing, assessing, and solving environmental problems at the local, regional, and global scale in a sustainable way. Graduates

with this interdisciplinary background gain the means to become informed, responsible, active citizens, and leaders.

### **Learning Objectives**

- Develop a broad, interdisciplinary framework for approaching complex, interconnected environmental problems we are facing;
- Develop strong analytic and quantitative skills needed to identify, design & conduct experiment, analyze and interpret data, and reach independent conclusions;
- Develop a rigorous scientific base across multiple disciplines (social, biological, and physical sciences) but with a strong concentration in one area so as to develop depth of expertise in that field;
- Communicate their findings to the scientific community, government agencies, non-government environmental organizations, and the public effectively (orally, in writing, and through electronic media) Understand professional ethical responsibilities, contemporary environmental science issues and the impact of environmental science in a global, regional and societal context;
- Understand the need, and have the ability to engage in lifelong learning and function effectively as a leader in the environmental field.

### **Minor Course Requirements (6 courses)**

- Required from core (any two from following): General Biology I, Calculus I, General Chemistry I, Organic Chemistry I, Physics I, Probability and Statistics
- Any one from the following: Energy and Environment (ES 2001), Water Management (ES 3008), Ecology (ES 3003)
- Any three courses (3000 or above levels) from the following: Geology (ES 3002), Environmental Chemistry and Toxicology (ES 4001), Environmental Microbiology (ES 4002), Global Climate Change (ES 4004), Waste Management (ES 4003), Urban Water, Sanitation, and Hygiene (WASH)- (ES 3010), Global WASH (ES 3018), Transformation Towards Sustainability (ES 3013), Environmental Policy Making (ES 4100), Environmental Management (ES 3014), Environmental Health (ES 3009) or other course with the approval of the minor coordinator.

### **Finance**

Knowledge in finance is relevant for all industry, macroeconomics policy makers, as well as managing personal and corporate finance. Financial literacy is an important skill – from enabling individuals to conduct their own affairs in a responsible manner, gain access to the services of banks and other financial institutions and understand the products they offer, to running a small and medium enterprise (SME) or working in larger corporations or with investors.

Entrepreneurship is often considered as one of the best mechanisms for development. Eminent economist Schumpeter's concept of "Creative Destruction" underlines the role of entrepreneurship for the development of an economy. Developing countries in Asia and the rest of the world promote entrepreneurial activities to achieve development goals. Entrepreneurs are viewed as leaders who can think critically, solve problems, look for opportunities to find new ventures, and thus build a prosperous future through innovative ideas. Entrepreneurship is not a mere skill. It is the capability to see the planet as it could be and convince others to help make it happen.

A solid understanding of the fundamentals of finance, management, and entrepreneurial techniques has become essential components of any education program seeking to prepare graduates for the real work environment.

### **Mission Statement**

Aligned to the mission of the University to graduate women who will be skilled and innovative professionals, service-oriented leaders in the businesses and communities in which they will work and live, financial literacy is an essential skill for AUW students who aspire to be well-rounded world citizens and entrepreneurs, who would be agents of change in their own personal lives as well as within their communities and countries. AUW believes that including training in finance, management, and entrepreneurship would enhance students' personal attainment, their future employability, and prepare them to face real world business challenges.

### **Finance and Management/ Finance and Entrepreneurship/Finance**

The goal of these minors is to provide students with the theoretical and empirical tools necessary to achieve high levels of expertise in principle areas of finance and management. A minor in Entrepreneurship will instill the entrepreneurial skills in our students and make them better leaders. It will help the students pursue a career that not only stimulates innovation in existing firms but also establishes new ventures as well. Students will learn about the challenges and opportunities usually facing new and existing businesses. At the same time, they will attain the ability to design and execute strategies to address the challenges and to seize the opportunities. These skills will prepare them to be business leaders, to be employed in both private and public sectors, in areas such as: asset management; commercial and investment banking; financial management in government, for-profit and not-for-profit organizations; insurance; real estate; public accounting; and health systems, to name a few.

### **Learning Outcomes**

AUW students will be competent with skills such as Disciplinary Knowledge, Critical Analysis,

Analytical Ability, Technical Competence, Ethical Awareness, Team Work, Effective Written and Oral Communication and Presentation Skills, and Global Leadership in Finance.

### **Required Courses (5 Courses Required)**

Modeled on the Harvard Business School HBS CORe program, successfully providing a solid training on the fundamentals of business thinking regardless of the background or major of the students, all minors will require students to take 3 fundamental mandatory courses:

Business Analytics  
Managerial Economics  
Financial Accounting

Students with a Minor in Finance and Management would need to take two additional elective courses from the following:

1. Financial Management
2. Investment Analysis and Portfolio Management
3. Risk Management and Insurance
4. Small Business Management
5. Working Capital Management
6. International Finance
7. Management of Financial Institutions

Students minoring in Finance and Entrepreneurship would need to take two additional elective courses from the following:

1. Entrepreneurial Business Fundamentals
2. Problem Solving, Troubleshooting, Entrepreneurship and Making the Transition to Workplace
3. Entrepreneurship and Financial Management
4. Entrepreneurial Finance
5. Small Business Management
6. International Finance
7. Investment Analysis and Portfolio Management

Students minoring in Finance with the completion of 3 fundamental mandatory courses would need to take two additional elective courses from the following. However, students not completing 3 of these courses can do minor in Finance by taking Introduction to Finance as a mandatory required course. In that case, students would need to take at least four additional elective courses from the following list of courses. It is important to mention that three of these courses must be 3000 level or above.

1. Entrepreneurial Finance
2. Investment Analysis and Portfolio Management
3. International Finance
4. Corporate Finance

5. Working Capital Management
6. Financial Markets and Institutions/Money and Banking
7. Financial Statement Analysis and Valuation
8. Any other course suggested by the program

In lieu of HBS CORE:

To qualify for a Finance minor without HBS CORE, students must take a total of 5 (five) AUW courses - two fundamental requirements and three Finance field electives. The two fundamental courses will consist of one 1000 and above level course (such as, Basic Economics / Principles of Microeconomics / Principles of Macroeconomics), and another 2000 level Introduction to Finance course. Additionally, students must choose three elective Finance courses at 3000 level and above from the courses listed above.

AUW includes Basic Economics as a Core Social Analysis requirement for AUW Science students (non-Economics and non-PPE students) who plan to minor in either of the three. Courses offered toward the Minor in Finance and Management, Minor in Finance and Entrepreneurship, and Minor in Finance will also be available as Free Electives for all AUW students.

## **Gender Studies**

### **Mission Statement**

This interdisciplinary minor explores the construction of gender identity, sex and sexuality and uses gendered representation as a central category of analysis. Students apply a variety of theoretical approaches to understand the construction and operation of power relations, social inequalities and resistances in the local, national and global contexts. The minor fosters inquiry into the relation of gender to politics, the labor market, family life, and practices of the production of knowledge and culture, paying mind to the intersection of gender with other categories of identity and modes of power, such as race, class, sexuality, religion, nationality, and ethnicity.

### **Learning Outcomes**

After completing this minor, students will be able to:

- Demonstrate a critical approach to the analysis of gender, sex, and sexuality that incorporates intersectionality, transnationality, and cultural diversity.
- Apply theoretical concepts of gender and sexuality to your own life, including why and how you might embrace, resist, and/or alter gender and sexuality norms.
- Apply theoretical concepts of gender and sexuality to other disciplines at the local, national, and global level.
- Implement efficient research skills and communicate findings in well-developed arguments.



### **Minor Requirements (5 courses)**

Required courses (at least 2 courses must be at the 2000 level or above and 1 course at the 3000 level):

- Introduction to Gender Studies
- Capstone/Senior Thesis (GS Focus) or an additional elective gender studies course
- Three elective gender studies courses (2000 or 3000 level)
- Examples from previous Academic Years: Gender and Nation, Gender and Law, Gender and Science

### **Mathematics**

#### **Mission Statement**

The mathematics minor is designed to provide students with a strong background in the skills of logic, reasoning, and critical thinking. We nurture a mathematical point of view in all of our students: those embarking on liberal education, those desiring skills for other endeavors, and those pursuing contemporary ideas in mathematics. Students will develop the ability to think clearly and critically about complex problems requiring the application of quantitative skills in an interdisciplinary environment. Through a combination of individual attention, group collaboration students are encouraged to become life-long learners and to apply their knowledge and skills to improve the world in which they find themselves.

#### **Learning Outcomes**

The mathematics minor offers students a way to complement and enhance their major while receiving valuable mathematics training. Students who complete the mathematics minor will be able to:

- Exhibit an understanding of the nature of mathematics.
- Develop computational, algorithmic, and technological problem-solving fluency.
- Follow complex mathematical arguments and develop their mathematical arguments.
- Understand the interactions between mathematics and their respective field and demonstrate the ability to apply mathematical concepts and techniques to problems in that field.

### **Minor requirements (5 courses)**

Required:

- Calculus-I
- Calculus-II
- Electives: (Any 3 from the following courses or similar courses approved by the math faculty)
- Linear Algebra (MATH 3001)

- Differential Equations (MATH 3000)
- Numerical Analysis and Computing (MATH 3005)
- Discrete Mathematics (MATH 3006)
- Operations Research (MATH 3100)

The minimum passing grade for courses to fulfill minor requirements is C-. Courses for the major cannot be taken pass /fail.

## **Performing Arts**

### **Mission Statement**

The Core Curriculum at the Asian University for Women is an integral part of the liberal arts and sciences education experience for our students. The program seeks to develop a range of skills, including creative thinking, written communication, oral communication and teamwork. A Performing Arts minor offers students a chance to more deeply strengthen these skills.

### **Learning Objectives**

- Learn how to communicate complex ideas through performative art forms (i.e social justice, well-being)
- Learn how to work as part of a creative team
- Develop your oral and written communication skills through the demands of the creative process
- A student can complete a minor in Performing Arts, drawing on a range of different disciplines (depending on what is available). This could include a sample of courses related to film, theatre, dance, or music.

### **Minor Requirements (5 courses)**

- Two 1000-level practical courses (Verbal Acting, Filmmaking, Dance)\* Can be cross-credited with required LCSA Core classes
- One 2000-level history/theory course (i.e History of Dance, Theatre in World History, Theory of Kathak Dance)
- One 2000-level practical course
- One 3000-level capstone course - this should include significant creative output in the form of a long-form film, a solo dance performance or a solo theatre production.

## **Psychology**

### **Mission Statement**

The psychology minor is designed to increase students' understanding of psychological concepts, theories and methods, to help students develop skills related to the scientific study of human behavior, thoughts, and emotions, and to foster intellectual curiosity as well as an understanding and valuing of the complexity and variety of human behavior.

### **Learning Objectives**

- Students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- Students will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.
- Students will respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.
- Students will understand and apply psychological principles to personal, social, and organizational issues.
- Students will be able to communicate effectively in a variety of formats.

### **Minor Requirements (5 courses)**

#### 2 required courses:

- Capstone/Senior Thesis on related topic OR suitable elective
- Mind and Behavior

Three (3) approved psychology courses, such as: Social psychology, political psychology, psychology of women, cultural psychology, psychology of human sexuality, psychology of gender, anthropology of mental health, psychological anthropology, and leadership, politics, and psychology. At least 1 course must be at the 3000-level and 2 of the 5 required courses may be “double dipped” with the core curriculum requirements.

### **Public Health**

#### **Mission Statement**

In line with the objective of developing women leaders in Asia, our mission is to train ethical public health leaders who can sustainably address and improve regional public health challenges and strive to eliminate health disparities across Asia.

#### **Learning Objectives**

- Identify contemporary public health challenges and effective interventions through appropriate literature review and creative thinking;

- Discover, plan, develop, test and disseminate evidence-based sustainable interventions to regional health problems in ways that promote equity;
- Utilize sound methodology to design studies, develop valid instruments, collect valid and reliable data, and analyze collected data;
- Develop and present demographic, statistical, programmatic and scientific information for professional and lay audiences that aims to influence others within the public health sector or government; Identify and use individual, team and organizational learning opportunities for personal, professional and organizational development.

### **Course distribution for students with Public Health minor (5 Required Courses)**

#### Public Health required Courses (3)

Introduction to Public Health

Introduction to Epidemiology

Principles of Biostatistics

Maternal and Child Health

Social and Behavioral Sciences in Public Health

Health Policy and Ethics

#### Additional courses (2)

Non-science Major: Biology I, Chemistry I, Physics I

Science Major: Psychology, Economics, Development Studies, Sociology, Anthropology

National and International Experience Recommended:

- Summer International Internship
- Summer National Internship
- Summer Undergraduate Research experience
- Summer Study Abroad Programs

At least 2 courses must be at the 3000-level and 2 of the courses may be “double dipped” with the core curriculum requirements. The minimum passing grade for courses to fulfill major requirements is C-. Courses for the major cannot be taken pass /fail.

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### **Mission Statement**

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thinking, written communication, oral communication and teamwork. A Performing Arts minor offers students a chance to more deeply strengthen these skills.

### **Learning Objectives**

- Learn how to communicate complex ideas through performative art forms (i.e social justice, well-being)
- Learn how to work as part of a creative team
- Develop your oral and written communication skills through the demands of the creative process

A student can complete a minor in Performing Arts, drawing on a range of different disciplines (depending on what is available). This could include a sample of courses related to film, theatre, dance, or music.

### **Minor Requirements (5 courses)**

- Two 1000-level practical courses (Verbal Acting, Filmmaking, Dance)\* Can be cross-credited with required LCSA Core classes
- One 2000-level history/theory course (i.e History of Dance, Theatre in World History, Theory of Kathak Dance)
- One 2000-level practical course
- One 3000-level capstone course - this should include significant creative output in the form of a long-form film, a solo dance performance or a solo theatre production.

## Policies

### Admissions Policy, Financial Aid and Tuition Fees

The Asian University for Women seeks promising, talented, and dynamic students who aim to make a difference in their societies.

#### Criteria for Admission

To be considered for admission, an applicant should:

Have completed 10+2, a total of 12 years of education.

Have demonstrated leadership potential and a commitment to work for positive social change.

Received an average of 60% of marks or equivalent grades in the final examinations, including a minimum score of 60% on both English and mathematics exams.

#### How to Apply

There are two application routes: regular admissions and transfer admissions. The application process is similar for both.

#### Regular Admissions

##### Step 1: Collect the Forms

Students can collect an application package from the AUW Office of Admissions, their Country Coordinator or from the AUW website (<http://www.asian-university.org/admission.htm>). The complete application package includes an application form, self-assessment form and an institutional recommendation form.

##### Step 2: Complete the Application Form and Provide Relevant Documents

In addition to the application form, the self-assessment form and the institutional recommendation form, applicants must submit the following:

- 3 copies of passport-size photographs with the name of the applicant written on the back.
- Certified/attested copies of academic transcripts of Grade 10, Grade 11 and Grade 12 or equivalent (if applicable)
- Copies of any other certificates received (e.g. for extracurricular activities).
- Copies of all relevant financial documents (e.g., bank statements, income tax certificates, salary statements, etc.).

##### Step 3: Send Application Material to the Office of Admissions

Applicants can email all application material to [admissions@auw.edu.bd](mailto:admissions@auw.edu.bd) or send all documents through post. To send materials by surface post:

Bangladeshi applicants should send all application materials directly to: The Office of Admissions

Asian University for Women  
20/G M.M. Ali Road  
Chittagong—4000, Bangladesh

International applicants should send all application materials to their country coordinator or directly to the Admission Office.

## **Transfer Admissions**

To be eligible for admission to AUW, prospective students must have a minimum cumulative grade point average (CGPA) of 2.85 from the transferring institution(s). They must also complete an admissions application (as articulated above for regular admissions) and sit for the entrance exam prior to meeting with the Academic Registry, who is the institutional transfer officer responsible for the initial evaluation. Prospective students should read AUW's policy on "CreditTransfer" for more information.

### **Transfer Application Process**

The applicant should submit the transfer application form along with other course materials relevant to the transfer procedure, including a personal statement about her motivation for studying at AUW, a CV and a transcript (a scanned official transcript will suffice).

Cost of Attendance (Tuition, Room, and Board): US\$7,500 per semester

Deposit payment: Students must pay a deposit of US\$1,000 for the semester, to reserve their place, within ten days of their acceptance into the program. Fees must be paid in full, one month ahead of the beginning of the term. Transfer students are not eligible for Financial Aid.

Transfer Application Deadlines:

|  |            |
|--|------------|
| To apply for transfer starting in the Fall semester:   | July 25    |
| To apply for transfer starting in the Spring semester: | October 25 |
| To apply for transfer starting in the summer:          | March 25   |

## **Selection Process**

Applications are selected based on academic performance, the student's personal statement, the record of extracurricular activities and community activities. Shortlisted applicants are invited to sit for a locally administered entrance examination, which consists of a section on math and a section on English (sentence structure, written expression, reading comprehension, and essay writing). Shortlisted applicants must also sit for an interview in March or April. Applicants are then chosen for admission either to the Pathways for Promise Program, Access Academy or the Undergraduate Program of AUW.

While all applicants are initially considered for the undergraduate program, if a promising applicant's performance on the entrance exam shows the need for additional academic preparation, she will be admitted to the Access Academy. Applicants who require additional preparation in English language skills may be admitted into the Pathways for Promise program, from where they may continue into the Access Academy. Upon successful completion of the Access Academy program and passing of its exit exam, the student can choose to enroll in the Undergraduate Program in the following academic year.

Students who have failed out of AUW and/or cancelled their enrollment in prior years may re-apply to AUW. These students must achieve high scores on the admission exam to be considered for re-enrollment and will not be eligible for financial aid or scholarships.

### **Financial Aid**

AUW strives to meet the financial need of each admitted student and offers full and partial financial aid based on each family's background and financial circumstances. All financial aid awards are assessed prior to the beginning of the academic program. Transfer students are not eligible for Financial Aid.

AUW doesn't offer full scholarships to two sisters from the same family to increase its reach and offer its opportunity to more families within its means.

#### **Evaluation Criteria for Initial Financial Aid**

- a. The overall financial situation of the student's family from the documents provided by the students and their families in the initial application form at the time of admission.
- b. Education level of the parent(s).
- c. Job(s) and profession(s) of the earning members of the family.
- d. The level of income of the parent(s)/guardian(s), i.e., the salary, business income, investment income, rental income, total household income, etc.
- e. The earnings of any supporting member(s) of the family, i.e. brothers or sisters.
- f. Movable and immovable properties in terms of market value at the present rates.
- g. Community's comment on the socio-economic condition/status of the family.
- h. The school the student attended prior to coming to AUW in terms of the educational costs for attending those schools.
- i. The schools of the siblings.
- j. Socio-economic situation of the geographical area where the student's family resides.
- k. The luxury items owned by the student and her family.
- l. Bank statements.
- m. Tax return documents.
- n. Salary certificates for salaried parent(s).
- o. Information from a third party source(s) as needed.
- p. General assessment of people's and committee members' perceptions on socio-economic situation of the family/parents if it is known publicly.
- q. Family composition.
- r. Number of non-earning dependents.
- s. Other document(s)/information as the committee deems necessary.



The Financial Aid Committee shall have the right to investigate and verify all the information and documents submitted by the applicants.

#### Eligibility to Continue Receiving Financial Aid

Students are required to maintain a CGPA of 2.0 each year to continue to receive financial aid; financial aid will be renewed annually until graduation from AUW.

A student cannot apply for any increase in the financial aid after she has started at AUW unless a drastic/major event occurred that severely changes her family's financial situation. Please keep in mind that any approval of such increase in financial aid later in the program will be a rare occurrence.

#### Travel Grant for recipients of Financial Aid

Travel grants may be awarded to international students who qualify for financial assistance. A travel grant is limited to a one-way ticket to Chittagong and a ticket home after graduation from AUW. Students seeking support for travel home during intermediate summers may engage in the AUW work-study program and earn money towards travel.

#### Admission Fee

Every selected student is required to pay an admission fee amounting to US\$ 600. This is a one-time, non-refundable fee. It is payable only at the time of admission in the first year and will not be charged every year. The University may, at its discretion, decide to waive the admission fee for deserving students on a case-by- case basis.

#### Tuition & Fees

AUW's fee for one academic year of study is US \$15,000, irrespective of academic program. This fee includes:

- Tuition.
- Academic supplies (books, papers, etc.).
- Residential facilities (accommodation, food, and other housekeeping services).
- Primary on-site health services (dental, ophthalmological and pre-existing conditions are not covered).

Breakdown of the annual fee is as follows:

|  |          |
|--|----------|
| Tuition                                    | \$ 9,000 |
| Books, Course Supplies, Student Activities | \$ 3,000 |
| Room & Board*                              | \$ 3,000 |
| Total per Year                             | \$15,000 |

\* Students who are Day Scholars (i.e. those not residing in AUW facilities) will not be charged for Room & Board, currently amounting to USD \$3,000 annually.

### Payment of Fees

The Tuition & Fees are payable in two equal semester installments on August 15 and December 15 each year. Students may apply to the CFO for a monthly payment plan, based on valid individual circumstances. All monthly payments must be made before 10th of every month.

AUW encourages all students to pay fees through cheque/pay order or bank transfer to AUW bank account. Students must notify finance department of direct deposit of fee, so that finance can issue them a receipt for the same.

### Fine for Late Payment of Fees

Fine for late payment is imposed with the objective to set a discipline on the timely payment of tuition fee. CFO may on her/his discretion can waive the late fine of deserving students.

| Rate of fine   | Effective date  |
|--|---|
| NIL  | Paid on or before due date  |
| Flat Fine of BDT 1,000   | Up to 15 days delay from due date   |
| Fine per month 2% on due amount in addition to flat fine of BDT 1,000. | The day after last day of flat fine. (part of the month will be considered as full month) |

### Delay in Payment of Fees

In case of a delay in payment, AUW will set in motion the following process:

1. Students not paying fees within due date shall face suspension of the following services within the university after 15 days of issuing first reminder:

- Access to Dining
- Access to Internet
- Issuance of books from Library

2. Students not paying fees even after the first reminder shall not be allowed to register for next semester. If the student is already registered for next semester then following consequences shall apply after 7 days of issuing second reminder:

- Registration blocked for next semester
- In case the defaulting student is already registered then she will be De-registered from next semester.

3. A student who is not enrolled for the next semester will continue to owe the previous dues, and any enrollment in a subsequent year or a semester will be permitted only when the dues are fully paid.
4. A student who owes fee to the University at the time of graduation shall not be issued with Academic Transcript, Degree or Diploma certificate and will not be allowed to attend Graduation Ceremony.
5. The University reserves the right to take appropriate action to effect recovery of dues from students who leave the University with outstanding debts.

#### Refund Policy

1. Students opting for withdrawal from AUW after securing admission and payment of the first installment but before start of the classes will be entitled to full refund subject to a flat fee of US\$ 200 towards administrative cost for withdrawal. Admission fee is not refundable as stated above.
2. If a student withdraws from AUW after the start of classes no refund for that semester will be made.
3. A student, who is dismissed for academic or disciplinary reasons, prior to the end of semester, shall not be refunded any tuition and other fees paid for that semester.

In every case, where a refund is applicable, refund will be made on production of the receipt of fee from AUW. Students' written application seeking for the refund shall be approved by the finance subject to submission of clearance from all relevant departments before a refund is paid. All refunds will only be paid through account payee cheque or bank transfer.

## Academic Policies

### Student Enrollment and Progression Policy

Candidates who have been successfully admitted into AUW are required to register for student enrollment with the Academic Registry. Their student status commences with the first year of enrollment until graduation or withdrawal.

The maximum period of enrollment at AUW is six years, including Pathways for Promise (Pre-Access) and Access Academy. Students who enter AUW through admission into Access Academy or direct entry into the Undergraduate Program may remain enrolled for the duration of their program, plus one additional year. Exceptions to this enrollment timeline may only be granted on a case-by-case basis by the Academic Actions Committee of the Academic Board.

### Study Plans, Course Selection and Registration

All students are required to register for courses according to their Program Study Plan.

Students who enter the Undergraduate Program are required to complete an Individual Study Plan in consultation with their assigned Academic Advisor and the respective Degree Plan of each Major. The Degree Plan is an essential tool for students to plan their academic journey, course selection and progression toward graduation, based on program requirements.

The Individual Study Plan must be approved by the student's Academic Advisor and submitted to Academic Registry according to the time periods announced by Academic Registry each semester. Study Plan forms can be collected from the Academic Registry.

During Course Registration, students are required to register for the courses indicated in their Individual Study Plan. Amendments and updates to the academic degree plan will be invited each semester, after the closing of Course Registration and ahead of the next semester registration session. Students may not sign up or register for courses taking place at the same time.

Owing to the short duration of the summer semesters, students who register for a summer course but wish to withdraw from the course should notify the instructor at least one week before the start of the semester. Students who do not appear for the first class, or during the first week, will receive a "W" (Withdrawn) in their Transcript.

### Course Registration

The Office of Academic Registry (Registry) in conjunction with Information Technology (IT) Services will work with Associate Deans/Dean of Faculty to arrange registration logistics at the end of each semester for the subsequent semester(s).

The University will ensure a fair process where students will register based on seniority (e.g. UG3, followed by UG2, then UG1, and Access Academy, as/if applicable). Registry will circulate details well in advance. The University reserves the right to pre-register students for some of the required courses (eg. Prob and Stats, WSEM, Calculus I, Major-related basic courses, etc.). Students must coordinate efforts under the supervision of their Faculty Advisor to ensure the correct set of electives and other courses are being taken by the student at the appropriate time.

### **Minimum and Maximum Course Enrollment Requirement**

For the duration of each 16-week Fall and Spring Semester, students are required to register for four (4) courses, with a minimum of three (3) courses and a maximum of five (5) courses, if their CGPA is 3.0 and above.

For the duration of the 8-week Summer Semester, students are required to register for at least two (2) courses per semester, or up to three (3) courses if their CGPA is 3.0 or above (on a need-basis). Students who register for five (5) courses in each of the 16-week semesters are not required to take summer courses.

Each student should enroll in ten (10) courses per academic year, which is inclusive of the 16-week Fall and Spring Semesters as well as the 8-week Summer Semester to graduate within the allotted time.

### **Minimum GPA Requirement**

All students are required to maintain a minimum Grade Point Average (GPA) of 2.0 on a scale of 4.0 each semester and a Cumulative Grade Point Average (CGPA) of 2.0, in order to progress to the next semester and year of enrollment.

### **Alternative Means to Obtain Academic Credit**

Distance education is not offered at or for AUW students at this time. However, if a student has completed all requirements and requires 8 or fewer credits to complete her degree requirements, she may do the following:

- participate in pre-approved online courses which fulfill AUW credit requirements (e.g. 15 hours of instruction per credit);
- Request a full-time faculty member to obtain permission to conduct a research project and/or an independent study (per established guidelines) under her/his supervision;
- Request a full-time faculty member to obtain permission to conduct an Internship for Credit under her/his supervision;
- Engage in pre-approved university-level classes at her hometown and/or location to fulfill the remaining requirements.

If a student faces significant issues which deters her from completing her studies at AUW and requires nine (9) or more credits to finish, she may transfer her credits to another institution and finish her requirements there by formally withdrawing from AUW.

Students interested to transfer credits must keep copies of all her detailed course syllabuses and transcripts.

### **Academic Actions Policy**

The Asian University for Women is committed to maintaining high academic standards while enabling student success by providing students with academic support and counseling throughout their academic career. The academic actions policy is designed to:

- a. Inform students at the university's academic standards and procedures;
- b. Identify students who may be in danger of failing one or more courses.
- c. Provide effective intervention and academic support.

The Academic Actions Policy does not cover disciplinary actions related to non-academic matters. Refer to the section titled Disciplinary Procedures for Violating a University Policy.

### **Academic Standards**

All students are expected to meet the following minimum standards in order to remain in good academic standing:

- a. A minimum 2.0 grade point average (GPA) each semester.
- b. A minimum 2.0 cumulative grade point average (CGPA);
- c. Maintaining adequate progress toward completing 40 credits (10 courses) per academic year. No student may enroll in fewer than 12 credits (3 courses) per semester, and fewer than 8 credits (2 courses) in the summer semesters.

Any student who does not meet the above standards will be subject to academic actions. Depending on the circumstances, any of these actions may be taken:

- a. Academic Alert,
- b. Academic Warning,
- c. Academic Probation (Contract),
- d. Exit.

Please refer to the chart below and read the explanation for each academic action. It is the student's responsibility to read this section very carefully and to understand the full implications of each type of academic action. If a student does not understand any of the terminology or implications, the student may contact her Academic Advisor or the Academic Registry for further clarification. The student should be aware of her academic shortcomings and AUW's expectations and must be proactive in seeking help and using all resources available on campus. While some academic actions may not appear on the student's transcript, all academic actions will be recorded in the Student Information System in the

Academic Registry's Office. The Academic Actions Committee will be apprised of all past and current academic actions entered in the student's academic record. While every effort is made to ensure accuracy of academic records, the student is advised to check her transcript regularly to make sure there are no discrepancies in her academic record in regard to grades, course names and credit earned etc. Depending on the gravity of the conduct, any of the above actions can be taken at any given point and without any given sequence.

## Academic Actions Summary

### **ACADEMIC**

#### **ALERT**

Duration: 1 Semester or Less

Source: Faculty and/or Academic Registry

Causes: Inadequate academic performance during the semester

Can be presented during any point in the semester

#### **ACADEMIC WARNING**

Duration: 1 Semester

Source: Academic Actions Committee and/or Registry

Causes: Semester GPA below, 2.0, **OR**

Fewer than 40 credits per academic year

To be presented: At the end of a semester or academic year;

Can be presented in the same semester as an Alert

#### **ACADEMIC PROBATION (CONTRACT)**

Duration: 1 Semester or more

Source: Academic Actions Committee

Causes: Semester GPA less than 2.0 for two consecutive semesters, **OR**

CGPA less than 2.0, **OR**

2 or more Academic Warnings, **OR**

**AAC reserves the right to place any at-risk student on academic probation at any time if they have already received a warning**

#### **EXIT**

Duration: Permanent

Source: Academic Actions Committee

Cause: Student does not fulfill contract requirements, **OR** CGPA falls below 2.0 for two consecutive semesters or more.



**Please note that a student may be put on Academic Probation without being put on an Academic Alert or Academic Warning. If a student engages in gross academic misconduct, AAC reserves the right to place a student in any of the steps above.**

### **Academic Alert**

The purpose of an Academic Alert is to identify and warn students who may be in danger of failing one or more courses. Through this process, the University can intervene, inform the students that a change is necessary, and connect struggling students<sup>1</sup> to existing services and resources so that they can maintain or improve their GPA.

Faculty members, in consultation with the Registry, are asked to identify students in their classes who may be in danger of failing as well as the reason for their concern. Alerts may be issued for excessive absences, trouble with subject matter, not completing assignments, inadequate academic performance and/or writing deficiencies.<sup>3</sup>

Academic Alerts will be recorded in the Student Information System in the Academic Registry's office. These will not appear on a student's official or unofficial transcript.

Most often, students will receive the alert during the academic semester via an official e-mail from the Academic Registry.

### **Academic Warning**

A student will be issued an Academic Warning if:

1. Her CGPA or GPA falls below 2.0 after the semester has concluded.
2. Credits in courses that count towards the GPA are fewer than 40 per academic year, or
3. Students have engaged in gross negligence in classes (i.e., Being repeatedly unresponsive to e-mail communication, final deadlines, etc.)

The Academic Warning will not appear on a student's permanent record but will be recorded in the Student Information System in the Academic Registry's office.

When an Academic Warning is issued, the Undergraduate student must meet her Academic Advisor to determine what steps she must take to get back on track in her academic career. During the course of the term, the Academic Advisor will maintain contact with the student to follow-up and help her get ongoing support. In addition, the Department Chair will be informed of the situation in case of any further negative development.

### **Academic Probation (Contract)**

A student will be placed on Academic Probation if she fails to uphold the following stipulations for 2 semesters or more:

1. Her semester GPA falls below 2.0; or
2. Her cumulative GPA falls below 2.0 and

### 3. Student fails to improve her performance upon receipt of the Academic Warning

Academic Probation will be recorded on the student's official file. An Undergraduate student placed on Academic Probation will have to formally meet with the Chair of the Academic Actions Committee to discuss and arrange a plan for success and sign an Academic Probation contract. The student's progress will be monitored by her Academic Advisor after the student signs the contract. Both will provide ongoing support to the student in the subsequent semester(s), but it is the student's responsibility to follow up and be proactive about getting help as/when needed. The student's progress will be monitored for more than one semester (unless otherwise specified).

Probation status will be lifted and removed from the unofficial transcript only if the student's term GPA and cumulative GPA meet minimum standards within two semesters. The record will, however, remain in the Student Information System in the Academic Registry.

The Academic Actions Committee will take into significant consideration all recommendations from the faculty and program department members of the student's designated academic program when reviewing the contract and/or the terms of probation.

The student's guardian(s) will be notified in writing and/or via an official phone call (or both) when she is placed on Academic Probation.

#### **Exit**

Any student who fails to meet the standards of her Probation Contract may be exited from the University. The student must leave campus at the earliest possible time after being notified of the expulsion and she may not reapply for admission to AUW. Her parents or guardians will also be notified of the exit.

A student may appeal the expulsion. The written appeal should be directed to the Vice Chancellor, who may constitute a Hearing Board to examine the details of the case. If the decision is that the procedure was properly followed, the Hearing Board will recommend to the Vice Chancellor that the expulsion will be upheld.

If the decision is that the procedure was not properly followed, the Board will recommend to the Vice Chancellor to review the decision. The final decision is that of the Vice Chancellor. If the decision of the Vice- Chancellor is to reinstate the student, instructions on registering for classes will be provided.

A student can only appeal the expulsion within the timeframe given in the expulsion notice. No appeals of academic dismissal will be heard after the assigned deadline.

#### **Resources**

Students who find that they are struggling to meet course requirements have a number of resources available to them. AUW encourages students to utilize these resources and speak to their Academic Advisors about other resources that may not be listed here.

The best resource available to any student is her course instructor. The course instructor will be able to explain course expectations, content, and what the student can do to perform well in the course. Thus, AUW encourages students to visit their course instructors during office hours or schedule an appointment.

Students can also use the AUW Writing Center, the Science and Math Center, or hire a peer tutor through their Peer Tutoring Service. For students requiring medical assistance, please visit the Health and Wellness Center, which includes counseling service.

Notes:

1 AUW defines “struggling students” as those students who: have poor attendance; are continually late for class or leave early; don’t take notes; are inattentive; don’t participate; or any student, who in the opinion of the faculty instructor, is unlikely to be successful in a given course.

2 Alerting a student at the six-week mark gives them enough time to change their behavior and has a greater impact on their overall performance. Faculty members can, however, refer a student they are concerned about at any time during the term, either before or after the Academic Alert deadline.

3 For a complete list of warning signs and behaviors a struggling student may exhibit, please see the section titled “Information for Faculty and Staff” at the end of this policy.

## **Academic Honor Code**

The mission of the Asian University for Women (AUW) is to educate ethical leaders. All forms of unethical behavior are serious violations of our mission, and therefore, will not be tolerated.

The integrity of students’ academic work is very important to AUW faculty. Universities are based upon the fundamental principle that the work presented truly belongs to the author, because the academic community revolves around ideas and creativity. Each person’s ideas are his or her contribution to the academic community. Therefore, taking another person’s ideas and representing them as one’s own is a serious form of dishonesty. Similarly, cheating (copying someone else’s work, asking for answers, sharing answers, etc.) and other forms of dishonesty (falsifying data, making up references, etc.) are also serious breaches of this honor code.

AUW students are expected to reflect a high standard of integrity in all areas of their lives, not from mere compliance with external rules, but from a personal commitment to these values.

Students who violate this code not only compromise their own integrity, but they undermine the mission of the AUW. Below are some standards and procedures that (1) define plagiarism and other forms of academic cheating; and (2) allow the faculty and administration to impose serious consequences when such incidents of unethical behavior occur.

## **Plagiarism**

Plagiarism is intentionally or unintentionally taking credit for another’s words or ideas. You may not plagiarize in your academic work, and you must adhere to the following:

- When you use someone else’s words (whether they are from a distinguished author or a classmate’s paper), place the words you have copied in quotation marks and provide the appropriate citation of author and source. A good guideline to use to avoid plagiarism is to make sure quotes of three or more sequential words from someone else are put into quotation marks.

- If you paraphrase (reword) another person's ideas, then you must also cite the source. Paraphrasing must involve changing the words and sentence structure of the original source.
- Cite materials you copy or paraphrase from the Internet, even if the author is not identified.

The various academic disciplines (humanities, social sciences, sciences) use slightly different formats for footnotes, endnotes, and bibliographies. Your professor for a particular class will tell you which format he or she wants you to use in that class.

### **Cheating on Exams or Quizzes**

Copying, asking for answers, sharing answers, and any other form of cheating (misrepresenting your own work and knowledge) on exams or quizzes are all forms of academic dishonesty.

### **Other Forms of Academic Dishonesty**

1. Making up references, quoting wrong sources, etc. You may not make up reference information or sources or cite other sources in place of the actual source of the material you are using.
2. Falsifying data. You may not make up or falsify data as part of surveys, in laboratory experiments, or in any other academic exercise.
3. Misrepresenting your situation to be excused from academic work. You may not go to the nurse or the counselor with a made-up excuse in order to be given an extension on a paper or other assignment or avoid taking an exam.
4. Submitting the same paper in more than one class. You may not submit the same paper, or substantively the same paper, in more than class unless you are given permission from both faculty members (or by the second faculty member in the event the second class occurs in a later semester). If permission is given, you must follow instructions on any modifications you must make.
5. Informing a student in a later class about questions on tests or quizzes. When tests or quizzes are given for multiple classes that meet at different times, a student who takes the exam at an earlier time may not inform students who have yet to take the exam about the test questions, answers, or anything else regarding the contents of the test or quiz.
6. Misrepresenting your academic work or qualifications in any way. Examples include misrepresenting one's grade point average or academic qualifications on an application for an internship or summer study.

### **Consequences for Engaging in Academic Dishonesty**

Incidents of academic dishonesty, along with supporting information, must be reported by faculty members to the chair of the Academic Actions Committee (AAC). The accused student should also be notified that the AAC has been informed of the offense. The chair of the AAC will coordinate with the

faculty member and student to organize a meeting, request information on prior offenses from the Academic Registry, and ensure the appropriate procedures are followed.

#### First Offense:

After a faculty member has identified academic dishonesty and reported it to the chair(s) of the AAC, the student will be required to meet with the relevant faculty member and the chair or a nominated member of the Academic Actions Committee to discuss the offense. During the discussion, notes will be taken on the Academic Misconduct Report Form, and all participants will sign the form to confirm the student has understood the nature of the offense. If the student admits to the academic dishonesty, the completed form will be submitted to the Office of the Academic Registry and kept in the student's file. The faculty in whose class the academic dishonesty occurred will have complete discretion as to the penalty.

If the student denies the charge of academic dishonesty, then the chair of the AAC will convene an Academic Honor Court consisting of 3 members of the AAC, including the chair, to hear the case. The Court will hear evidence from the faculty member, student, and any other witnesses the Court deems appropriate. If sufficient evidence of academic dishonesty is found, the Court may institute a penalty for the misconduct at the faculty member's discretion. A report of the proceedings will be written by the chair(s) of the AAC and filed along with the Academic Misconduct Report Form in the student's file.

#### Penalties for Additional Offenses:

- Second Offense: The student will receive a grade of 'F' for the course in which the academic dishonesty took place, and/or will be placed on academic probation where they sign a contract agreeing that any additional offense will result in their expulsion from the university.
- Third Offense: The third offense will automatically result in students' expulsion from the university.

Note: If multiple offenses are committed, even if the offenses are from the past courses, the AAC reserves the right to place the student on academic probation and/or to exit the student from the institution permanently.

#### **Important Notes:**

Note that actions taken for ethical violations will add to any existing academic actions or serve as the starting place for subsequent academic actions. For example, a student currently on Academic Probation or Final Academic Probation that engages in academic dishonesty will undergo a more severe action than their current status. In the case of an academic action coming after an ethical violation, the action taken will be more severe than that given for cheating or plagiarism.

A record of each incident of plagiarism, cheating, or any form of academic dishonesty will be kept by the AUW Academic Registry in the student's file. A student's financial aid will not be extended beyond four years of undergraduate study if the student must repeat courses due to failing grades resulting from poor academic performance or cheating/plagiarism violations.

## Appeals Process for an Academic Decision

A student can appeal the final decision of the Academic Actions Committee (AAC) to the Office of University Registrar at the University. It is imperative to note that appealing a final decision of AAC can only be requested if a student can show the final decision of the AAC was assigned arbitrarily or impermissibly.

A final decision of AAC is deemed to have been assigned arbitrarily or impermissibly if, by a preponderance of the evidence, a student establishes that:

1. The final decision was based upon the student's race, color, religion, national origin, age, sex, disability, sexual orientation, or for some other arbitrary or personal reason unrelated to the academic performance of the student.
2. The final decision was assigned in a manner not consistent with the standards established by the University Bulletin.
3. The final decision was the result of a clear and material mistake in calculating or recording grades or other evaluation (e.g., assignments and tests).

### Grounds for an Appeal

If a student believes that during major assessment periods in the duration of the semester, there was significant delay in submitting assignments and/or sitting for assessment due to the following:

- Suffering from one or more incident(s) which were outside your control; and
- were unforeseen and unforeseeable; and
- were serious; and
- were evidenced to be true; and
- relate directly to the timing of the assessment affected (i.e. That they occurred at the same time as the assessment date, or during the preparation period immediately prior to the assessment date); and
- either prevented you from submitting or presenting for the assessment by the due date, or where you have undertaken the assessment, adversely impacted on your performance such that if it had not been for those circumstances you would have performed significantly better.

The following are not grounds to submit an appeal:

- Medical circumstances that occurred outside the relevant assessment period; or
- Commitments to family/friends or other; or
- Computer/printer problems; or
- Poor study practice or time management; or
- Failure to keep note of due dates/times; and/or
- Late disclosure of circumstances.
- Process for an Appeal

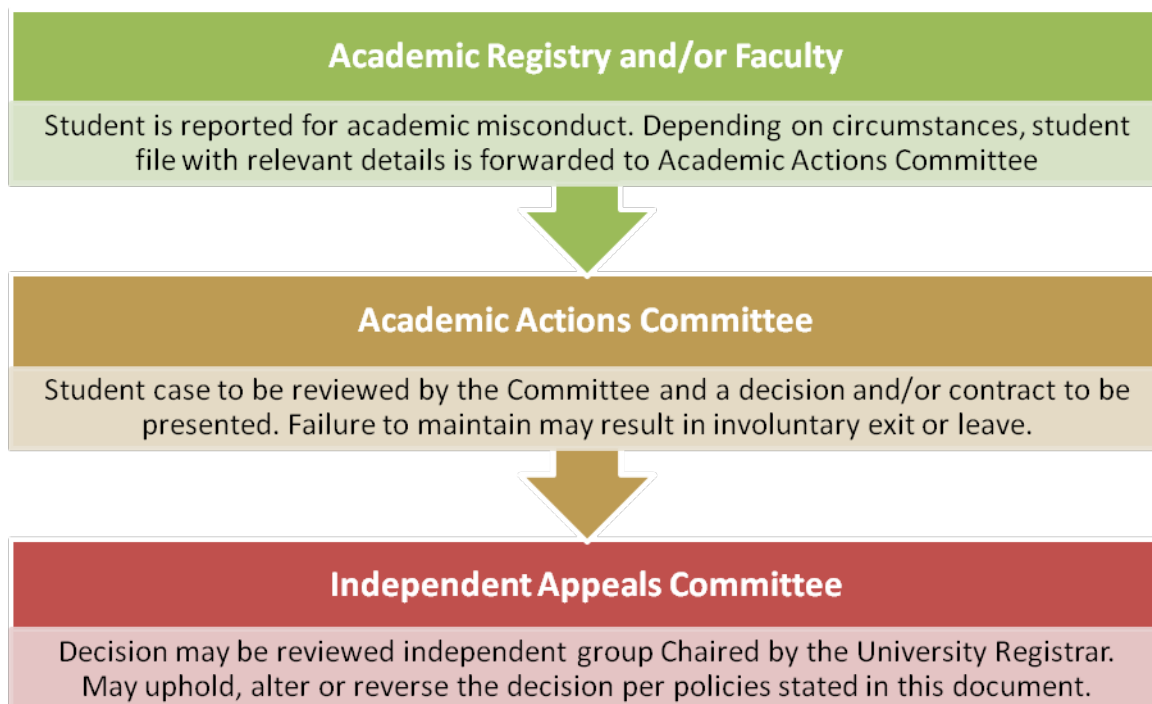
- Students should submit an application in writing with all relevant details and evidence to the University Registrar. The application should include only relevant details. Any evidence must be appended to the application and labeled for the reviewer.

It is important that you provide as much evidence and information as possible in support of your claim. Where evidence is not presented in English, it is your responsibility to have it independently translated by an accredited translator, prior to submission.

The appeal will be reviewed by an independent group Chaired by the University Registrar who will form a formal committee. This group will have the power to uphold, alter or reverse the original decision. This final decision cannot be appealed and can take anywhere between 2 to 12 weeks to process (excluding breaks and summer period between May to August, during which it can take longer). A student cannot make more than one appeal during the time they are maintaining an enrollment at the University.

Further advice or guidance about this process can be requested from Academic Registry.

### Summary of Appeals Process



## Attendance Policy

AUW expects students to regularly attend all class meetings. However, instructors may have specific attendance requirements for individual courses, so students are expected to review their syllabus and acquaint themselves with and meet all course requirements.

From the beginning Fall Semester 2019 onward, all students must record their attendance in each class via the fingerprint scanner situated in each classroom.

Since the onset of the COVID-19 Pandemic, AUW has gone online since March 2020 until further notice.

Students should attend online classes via Zoom Technologies USA (Zoom). Attendance is monitored and recorded by faculty members. If a student is unable to attend class due to unforeseen circumstances, she must inform the faculty in writing before or follow up after class and request a recording of the lecture. Students are encouraged to ensure they attend classes. However, if a student has difficulty joining classes due to community issues which are outside the student's control (e.g. Regional conflict, political unrest or natural calamity, etc.) students are requested to submit credible evidence of the matter and work out a solution after talking to the course instructor and their Academic Advisor. If a mutually agreed upon solution is not available, Undergraduate students will be allowed to drop the semester without a W grade in the first 4-6 weeks of the semester. After this period, students will only be allowed to drop with a 'W' Grade.

### Definitions

- Attendance is defined as physical attendance or participation in an academically related activity such as submission of an assignment, an examination, participation in a study group or an online discussion, etc. Instructors who do not take attendance may utilize key assessment points (e.g. projects, papers, midterm exams, and discussions) as benchmarks for participation.
- **Excused Absence** is defined as an absence approved or authorized by AUW.
- **Unexcused Absence** is defined as any absence not approved or authorized by AUW.

### Excused Absences

- Death in the immediate family (parent/guardian, children or siblings), for up to one week.
- Hospitalization for serious illness or medical problem/disability, for up to two weeks (for longer illnesses, a medical leave for the term may be granted, if applied for)
- Serious electricity issues or national emergencies which are outside of the student's control (e.g. Accident, natural disaster, national emergency, etc.).
- Attending an AUW sponsored event or representing AUW at a meeting or event, for up to one week.

Medical leaves or extended absences from physical education (if applicable) will be granted by the Dean of Faculty & Academic Affairs and go to the Academic Registry who will inform the relevant faculty.



## **Unexcused Absences**

- Family events (e.g. weddings).
- Attending to family issues, illnesses of family members outside of the immediate family.
- Attending a conference, event, or other outside activity that is not authorized by AUW, even if the organizer awards the student the funds to attend.

## **University-Wide Cap of 25% on Maximum Number of Absences**

Combined absences that exceed 25% of the total number of classes will result in failing the course, regardless of whether the leave is excused or unexcused. This is a mandatory requirement for all courses at AUW. The Add/Drop Period will not be included within this time frame.

If a student requires a leave of absence she must apply for this at the beginning of the semester. A student is not allowed more than one full-length semester of absence. However, until the University reopens after the COVID-19 Pandemic, students will be allowed to drop an additional full semester (fall or spring semesters) if needed.

A student may still choose to attend and/or participate in these outside activities, but will need to accept the consequences of missing whatever academic work occurs during their absence. In these cases, there will be no possibility to make up academic or physical education class work.

Since the COVID-19 Pandemic, AUW has shifted to distance learning via online classes. Although the Faculty of the University understands the many challenges that may derive from this change, faculty continue to strive and ensure a quality online education, thus this policy stands. If a student feels her internet connectivity is unstable to the point where she will miss 25% or more of the classes, she may be requested to drop the class. However students can only drop a class with a 'W' grade after the end of the Add/Drop period through the sixth week of the 16-week semester and third week of an 8-week semester. If a student feels she has an exceptional circumstance, which could allow her to miss more than 25% of the class, then she should submit an application with evidence to the Academic Actions Committee for them to review any exceptional cases.

Students in Pathways for Promise and Access Academy should be in touch with their Program Director to resolve any issues in relation to this. However, Undergraduate (UG) Students should not miss more than 75% of their classes. If a student misses more than 25% of the classes due to an unprecedented or exceptional circumstance, she will need to meet with her faculty advisor and faculty member to discuss and come up with an absence recovery plan.

## **Absence Recovery**

Faculty are urged to keep perspective of the student absences in relation to their classroom engagement. (e.g. Students who attend fewer classes but are more engaged vs those who attend for the sake of attending). UG Faculty will need to develop an Absence Recovery plan for the students who are missing the most classes and constitute what counts as a make-up assignment for attendance. To create this plan, a form detailing guidelines can be found from the Office of the Academic Registry. The form should be filled out and sent to the Office for the student record.

For Pathways for Promise and Access Academy Programs, the Director of the program will use their discretion and do the same in conjunction with the relevant program faculty.

### **First Day Attendance**

Students are expected to attend the first day of class of a semester. If a student is not present at the first class, and there are students waiting to be added to the course, the instructor may drop the student from the course for non-attendance. The student who is dropped would then have to add a course that has space once she returns to campus. If the student has an extraordinary reason for not being able to get back to campus by the first day of classes, she should email her instructors and ask them not to drop her. However, instructors have the right to deny or grant this request at their own discretion.

### **Online Course Completion Requirements**

Credits for online courses must go through an approval process before appearing on academic transcripts. The on-campus faculty member or a panel of faculty members of the course or program will set the criteria at the beginning of the semester on fulfillment of which credits and grades will be awarded. Criteria may include--but are not limited to--attendance in on-campus facilitating sessions, additional quizzes, exams, assignments, projects etc. If a student fails to fulfill any such criteria declared at the beginning, she will receive an "F" grade no matter what grade she receives from the offering institution. After completion of such courses, the on-campus faculty member or panel will submit grades. Grades from the offering institution are suggestive, and on-campus faculty member(s) will submit the final grade. In general, all online courses must be pre-approved prior to being considered towards the student's remaining graduation requirements.

## Grading Policy

Fall 2019 Semester onward:

| Letter Grade | GPA Point Value | Percentage          | Description |
|--------------|-----------------|---------------------|-------------|
| A+           | 4               | 97-100 <sup>^</sup> | Excellent   |
| A            | 4               | 93– 96              |             |
| A-           | 3.7             | 90– 92              |             |
| B+           | 3.3             | 87 – 89             |             |
| B            | 3.0             | 83 – 86             |             |
| B-           | 2.7             | 80 – 82             |             |
| C+           | 2.3             | 77 – 79             | Good        |
| C            | 2.0             | 73 – 76             |             |
| C-           | 1.7             | 70 – 72             |             |
| D+           | 1.3             | 67 – 69             | Average     |
| D            | 1.0             | 60 – 66             |             |
| F            | 0.0             | 59 or below         | Poor        |
|              |                 |                     | Failure     |

<sup>^</sup>These percentages are meant to serve as a guideline. Curves may be used to adjust actual percentages so that they match the descriptions created for a particular class.

The letter grade for each course as well as semester and cumulative GPAs will appear on the transcript.

Before Fall 2019 Semester

| Letter Grade | GPA Point Value | Percentage             | Description |
|--------------|-----------------|------------------------|-------------|
| A+           | 4.3             | 96.68-100 <sup>^</sup> |             |

|    |     |              |  |
|----|-----|--------------|--|
| A  | 4.0 | 93.33-96.68  | Excellent to very good; comprehensive knowledge and understanding of subject matter; marked insight and/or originality.        |
| A- | 3.7 | 90-93.32     |  |
| B+ | 3.3 | 86.68-89.99  | Good: moderately broad knowledge and understanding of subject matter; noticeable insight and/or originality.                   |
| B  | 3.0 | 83.33-86.67  |  |
| B- | 2.7 | 80.00-83.32  |  |
| C+ | 2.3 | 76.68-79.99  | Satisfactory: reasonable knowledge and understanding of subject matter; some insight and originality.                          |
| C  | 2.0 | 73.33-76.67  |  |
| C- | 1.7 | 70.00-73.32  |  |
| D+ | 1.3 | 66.68-69.99  | Marginal: minimum of knowledge and understanding of subject matter; limited insight and/or originality.                        |
| D  | 1.0 | 63.33-66.67  |  |
| D- | 0.7 | 60.00-63.32  |  |
| F  | 0.0 | Less than 60 | Failing: unacceptably low level of knowledge and understanding of subject matter; severely limited insight and/or originality. |

^These percentages are meant to serve as a guideline. Curves may be used to adjust actual percentages so that they match the descriptions created for a particular class.

The letter grade for each course as well as semester and cumulative GPAs will appear on the transcript.

### Symbols Used in Lieu of Grades

| Symbol | Explanation   |
|--------|---|
| S / U  | Satisfactory / Unsatisfactory: May be used in special courses and situations (some summer programs, courses that involve an internship or other practicum) for a pass/fail grade. GPA will not be affected. |
| INC    | Incomplete: (1) Student has substantial equity in the course and (2) is unable to complete course requirements because of circumstances beyond her control. Only faculty members may award grades of INC.   |
| R      | Registered in year-long course which does not require a grade at the end of the first term (a possible example, might be a year-long senior thesis)   |
| NA     | Not attending: Student is officially enrolled in a course but has not attended or participated in class work (for use at midterm only; not accepted at end of term and not entered on student transcripts). |
| W      | Withdrew from course (with advisor's written permission) beyond midterm.  |
| WF     | Withdrew from course/stopped attending (without permission)   |

### Calculating (Cumulative) Grade Point Average

To calculate a (C)GPA, multiply the value of the grade received (point values shown above) by the credit hours for the course. Then add up the total points and divide by the total credits. As an example:

| Course         | Grade | Credits   | Quality Points |
|----------------|-------|-----------|----------------|
| Course 1:      | A     | 4         | 16             |
| Course 2:      | B     | 4         | 12             |
| Course 3:      | C+    | 4         | 9.2            |
| Course 4:      | F     | 4         | 0              |
| <b>Totals:</b> |       | <b>16</b> | <b>37.2</b>    |

GPA = total quality points ÷ total credits

For example,  $37.2 \div 16 = 2.33$  (To calculate your CGPA, just add more courses to the above formula.)

Grades of INC, S/U, and W are excluded from GPA calculation. A grade of WF is included as an 'F' grade in GPA calculation. Only grades for courses taken at AUW are factored into a student's GPA.

## **Disputed Final Grades**

If a student believes that her final grade has been unfairly assigned and has substantial evidence to support the grievance, she must first discuss the grade with her instructor. If, after the discussion, the matter remains unresolved, the student may file a formal written statement with a full explanation to the Dean of Faculty & Academic Affairs by the end of the sixth week of the following term or up to six weeks after grades have been released, whichever is later (Access Academy students should direct their request to the Director of the Access Academy). If the Dean/Director is unable to resolve the dispute, the student may then petition to the Academic Actions Committee<sup>1</sup> and request a grade review. This request must be filed within 30 days of the Dean/Director's decision. The Committee will review the case, confer with the Vice Chancellor, and upon the Vice Chancellor's approval, their decision shall be final.

## **Grade Reports, Transcripts, and Records**

Students can access their term grades/academic record on AUW's secure website ([www.auw.edu.bd/Studentportal/](http://www.auw.edu.bd/Studentportal/)). Grades are generally updated within 2-4 weeks of the end of the semester.

All student records are confidential, and information will only be released at the request of the student or an appropriate institution. In order to ensure confidentiality, all requests for transcripts must be submitted in writing and personally signed. Transcripts will only be released when the student has met all financial obligations to AUW. A transcript request should be submitted at least three business days in advance of the date on which it is needed, one week in advance during registration and commencement periods. Once students are awarded their undergraduate degrees from AUW, no changes can be made to their official academic records.

## **Honor Roll**

Each semester, a student can make the honor roll list by receiving a GPA of 3.5 or higher as long as she is enrolled in a full-course load (minimum 3 courses or 12 credits for fall/spring and 2 courses for summer semesters). This honor will be noted on the student's official transcript.

## **Incompletes**

If a student receives an INC grade, the faculty and the student will need to devise a plan for the student to complete the work and the student's progress will be monitored. Failure to complete the work within a maximum of six weeks will result in a grade being assigned based on work completed. If Faculty makes an exception to this, it cannot be extended for more than a semester and in the event that the faculty no longer works at the University, the student will not get credit for the course. If a grade is not submitted by the official grade submission date of the following semester, students may automatically receive an "F" grade.

## **Repeating Coursework**

For credit/GPA purposes, students may only retake those courses in which they have received an F grade (with the exception of Major-related and/or Major required courses), if the course is offered and the student does not fall behind in taking other courses required for progression and graduation. All grades earned will remain permanently on the student's academic record; however, only the grade and credit recorded for the last time the course is repeated are used in the calculation of the cumulative GPA and credits earned. Students should be aware that repeating coursework can affect their progress towards degree completion, which in turn will affect their eligibility to receive financial aid.

## **Course Retake Limit**

Students who fail a required course are required to retake it when the course is offered again. Students may take the required course maximum twice. Students who need to take it a third time or more must pay for the course in their third attempt and consider revising their Major selection.

In general, students cannot take more than 2 retake courses during her time as an undergraduate student at the University regardless of the grade they have received in the course. It should be pre-approved and within good reason for a student to retake any course, especially if it is not required for her Major.

## **Final Assessment Exceptions**

Both faculty and students are expected to conduct all final assessments during Assessment Week, as advertised in the Academic Calendar for the year. Students who miss their final assessment must inform the course instructor in writing within 24 hours before or after the scheduled due date. The course syllabus policy and general AUW grading policy will be applied unless the student informs the Academic Registry and the Program Head about any special circumstance beyond their control which may have prevented participation in the assessment. Evidence of any extenuating circumstance(s) must be submitted to the aforementioned parties and reviewed. AUW reserves the right to accept or reject any extenuating circumstances if the student does not inform within 24 hours and/or if the evidence is found to be insufficient. False evidence will result in an automatic F grade for the final assessment and/or the course in its entirety.

## **Transfer Students**

To be eligible for admission to AUW, prospective students must have a minimum cumulative grade point average (CGPA) of 2.85 (on a scale of 4.0) from the transferring institution(s). They must also complete an admissions application prior to meeting with the Academic Registry, who is the institutional transfer officer responsible for the initial evaluation.

## **Transfer Credits**



Prospective students wishing to transfer to the Asian University for Women (AUW) or current AUW students who plan to study at another institution for a short period of time may request to have their courses and grades evaluated for transfer credit. Below are the procedures.

### **Current Students**

Current students who have the opportunity to study at another institution for either a term or an academic year should first request approval from their academic dean for temporary withdrawal from the University. They should also consult their academic advisor that the courses studied will transfer into their core curriculum and/or major at AUW. This request must be made in writing at least two weeks before the start of term. Once approved, the student will be notified of the withdrawal procedure.

### **Evaluation**

To have courses and grades evaluated for transfer credit, both prospective and current students should first provide an official copy of their transcript to the Office of the Academic Registry either via email or fax once they are ready to enroll at the University. The Academic Registry, with the help of relevant academic departments, will then evaluate the transcript(s) to determine if the courses meet the department standards and the number of credits that can be accepted. Only courses with a grade of “C” or higher will be considered for transfer credit. To help make a determination, students will need to provide catalog course descriptions and/or course syllabi.

After the Academic Registry has evaluated the transcript(s), s/he will schedule a meeting with the student, either in-person or via phone. During this meeting, the Academic Registry will inform the candidates of

### **Independent Study**

AUW students who wish to pursue a topic of study which is not offered or available in the regular curriculum, may apply for Independent Study. Independent Study is a for-credit course taken on a ‘pass/fail’ basis, comparable to other courses in terms of semester duration and work assignment. Independent Study is conducted under the supervision of a qualified full-time faculty member of the University.

Independent Study is designed to deepen the student’s knowledge in a particular area, through a specified study plan and reading list, or a research project, a practicum, or performance in the arts. It is available to students in their second or third year of enrolment, as a Major Elective or a Minor Elective, or as a Free Elective course option. Independent Study may not count towards the Core General Education Requirement or the Major/Minor mandatory course requirements. Students may take a maximum of two (2) Independent Study courses, or a maximum of 8 credits comprising Independent Study, Internship for Credit, and/or Summer Research Project.

To qualify for Independent Study, students must meet the academic requirements of AUW, demonstrate that they are in good standing, have achieved a minimum CGPA of 3.0, and are on track with courses toward graduation.

To earn credit from an Independent Study course, students are expected to dedicate a minimum of 10 hours per credit (for a maximum of 4 credits/40 hours) in direct study of the selected topic, and to produce a paper (or other output related to the study topic), on the basis of which they can be assessed by the supervising faculty. Independent Study may be taken on a 'pass/fail' basis.

Normally, Independent Study may be conducted in the Fall and Spring Semesters of the Academic Year.

To apply for approval of Independent Study, students are required to follow the requirements set out below:

1. Consult with their Academic Adviser on the suitability of Independent Study as an option to complete graduation requirements;
2. Identify a qualified full-time faculty member able to guide and supervise the Independent Study content as Independent Study Adviser;
3. Develop a goal (purpose/aim of study) statement for what the student hopes to accomplish and the purpose of the independent study;
4. Select and/or develop learning objectives related to the goal statement;
5. Develop a timetable for implementation of activities and completion of course requirements. In consultation with the Independent Study Adviser,
6. Write a brief description of the background, interest, experience and strengths the student brings to the topic. Give a description of academic research available in this area that provides a context for the proposed independent study;
7. Explain why the student wants to do this study: list learning objectives by using broad statements describing what the student is going to achieve. Identify what they hope to gain in terms of knowledge, skills, personal and professional learning, and other experiences whilst undertaking the independent study. List each objective in the plan and note the competencies you are expected to meet through specific learning activities. The reasons for wanting to do an independent study may include personal interest, practical interest (i.e. to raise awareness, evaluate a policy or social intervention), political interest (is there a political cause the student would like to explore, is there an organization that interests them), theoretical interest (is there a theory the student wants to research at length), or technical interest (testing/developing some technology).

Whatever the rationale for proposing the independent study is, it must be explained clearly, with an emphasis on what the student hopes to gain from it (for example, raise awareness, find out people's attitudes about something, developing a theoretical framework, etc.).

8. Develop a study plan to set out how the independent study will be conducted: what the student is expected to do, or to produce, and in what timeline the activities will be completed. The plan must contain the types of activities/assignments that will be completed during the semester as well as a list of texts/reading material that will be used in collaboration with the supervisor. This may include written assignments, short reports, presentations, or developing something else. A research writing component is required if the independent study is a research project.

The plan must explain how the planned activities will be carried out with an indication of hours dedicated to each activity: a breakdown of the steps to be followed with expected outcomes (for example, a month-by-month or week-by-week schedule). This is to get students to think about whether they have succeeded in doing what they set out to do. Include a meeting schedule between the student and the supervisor.

9. Agree with the Independent Study Adviser on the Assessment Methods of the activities carried out.

10. References used to support the proposal and study plan should be listed in a Reference section.

The Independent Study Plan developed in consultation with the Independent Study Adviser must be submitted for approval by the Dean of Faculty & Academic Affairs within the first four weeks of the Fall or Spring Semester.

### **Limit on Extra Credits**

Unless a student is approved for an exchange program arranged via the University, students can only apply for up to 8 credits from external courses (e.g. Internship for Credit, Online Course, Independent Study, Summer Project, etc.).

## **Fulfillment of Requirements for Graduation**

Students enrolled in AUW Degree programs are required to complete a minimum of 120 credits, based upon the AUW Curriculum structure and program guidelines.

Graduation Requirements for students entering the undergraduate program in 2019 summer or later

|                             |                                    |                    |
|-----------------------------|------------------------------------|--------------------|
| Core Curriculum             | 11 courses                         | 44 credit hours    |
| Major Concentration         | 10-16 courses                      | 40-64 credit hours |
| Free Electives and/or Minor | 2-8courses (minors 5 or 6 courses) | 12-32 credit hours |
| Total                       | 30 courses                         | 120 credit hours   |

Graduation Requirements for students entering the undergraduate program in 2015 or later

|                             |                                    |                    |
|-----------------------------|------------------------------------|--------------------|
| Core Curriculum             | 12 courses                         | 48 credit hours    |
| Major Concentration         | 10-16 courses                      | 40-64 credit hours |
| Free Electives and/or Minor | 2-8courses (minors 5 or 6 courses) | 12-32 credit hours |
| Total                       | 30 courses                         | 120 credit hours   |

Graduation Requirements for students entering the undergraduate program from 2012 to 2014

|                             |                                     |                    |
|-----------------------------|-------------------------------------|--------------------|
| Core Curriculum             | 12 courses                          | 48 credit hours    |
| Major Concentration         | 10-16 courses                       | 40-64 credit hours |
| Free Electives and/or Minor | 4-10 courses(minors 5 or 6 courses) | 16-40 credit hours |
| Total                       | 32 courses                          | 128 credit hours   |

All undergraduate students are required to successfully complete three semesters of physical education in order to graduate.

Graduation Honors

Three grades of Latin honors are awarded at graduation for superior attainment in scholarship. B.Sc. and B.A. diplomas are inscribed summa cum laude, magna cum laude, and cum laude, based on the following minimum cumulative GPA requirements:

- Summa cum laude (highest honors) – CGPA 3.9 or higher
- Magna cum laude (high honors) – CGPA of 3.75
- Cum laude (honors) – CGPA of 3.5

CGPAs will not be rounded for calculating Latin honors.

#### Graduation and Attending the Commencement Ceremony

The University may choose to host a Commencement ceremony to celebrate the accomplishments of students who have successfully completed all the requirements necessary for their undergraduate degrees.

“Walking” is the term used to signify student participation in this event. Walking, however, does not indicate degree completion or a guarantee thereof. Only when all requirements are completed after a thorough audit will a student’s degree be awarded. If those requirements are not completed within the specified timeframe, the degree will not be awarded.

Exceptions for a student’s eligibility to walk can be made on a case-by-case basis. Students with unfinished courses but on track for graduating within the following summer semester may be allowed to walk in the preceding Commencement ceremony at the discretion of the Dean of Faculty. The student must present an application detailing a viable plan for completing their remaining degree requirements within or before the following fall semester. Undergraduate students who have not completed all of their degree requirements, but have met the eligibility criteria noted above, may receive permission to walk at Commencement at the discretion of the Dean of Faculty.

## Withdrawal Policy

The following policy outlines various types of course withdrawals. Items marked with an asterisk (\*) only apply to Undergraduate students.

### Add/Drop Courses\*

All students are required to register for courses in accordance with their Individual Study Plan, approved by their Academic Advisor. Changes to the course registration during the Add/Drop period may occur owing to course schedule conflict, unavailability of seats in the course, course cancellation, or change in the declared major (for UG2 students).

#### Adding a Course\*

Students can add a course to their schedule, or simultaneously add a course while dropping another, during the Drop/Add Period as listed on the Academic Calendar, and with the written approval of their Academic Advisor, based on the student's Individual Study Plan.

A student must have a minimum CGPA of 3.00 in the previous semester to be allowed to add a fifth course (in the 16-week semester) or a third course in summer semester (in the 8-week semester).

First year undergraduate students are not allowed to take a fifth course in their first semester or a third course in the summer semester.

The Academic Registry will process Add/Drop Forms for such additional courses after the regular registration has ended and only for courses with open seats.

To add or swap a course, a student must complete the Add/Drop form, which can be found in the Office of the Academic Registry, in consultation with the course instructor and the Academic Advisor. Her course instructor and Academic Advisor must sign the form, signaling that they have consulted the student and made sure all academic standards are met. The completed form must be deposited at the Office of the Academic Registry.

#### Taking a Course for Pass/Fail

Students may take a course for pass/fail (S/U) unless it is a major-related course (excluding independent studies and approved transfer credits); however, the number of S/U courses should not be more than one (1) per academic year.

#### Dropping a Course (without a "W" on the transcript) \*

Any student wishing to withdraw from a course without a "W" (known as a drop) may do so before the end of the official Add/Drop Period in the Academic Calendar, as long as the student remains registered for at least 12 credits (or three 4-credit courses) in the regular semester.

An eligible student can drop a course by completing an Add/Drop form in consultation with her course instructor and Academic Advisor. Her course instructor and Academic Advisor must sign the form, signaling that they have consulted the student. Completed forms then must be deposited at the Office of the Academic Registry.

### **Withdrawing from an Individual Course (with a “W” on the transcript) \***

Any undergraduate student wishing to withdraw from a course after the Add/Drop period may do so before the “last day to withdraw from a course with a “W” grade” (as listed on the Academic Calendar, typically within 4-6 weeks into the semester), provided she maintains a minimum 12-credit hour load (or three 4-credit courses) in the regular semester. A “W” will appear on her academic transcript.

In order to withdraw from a course with a “W”, the student must complete a form in consultation with her course instructor and Academic Advisor. As with dropping a course, the course instructor and the Academic Advisor must sign the form, signaling that they have consulted the student. Completed forms then must be deposited at the Office of the Academic Registry.

Students may not withdraw from more than one course with a ‘W’ grade per academic year.

Generally, students will not be able to withdraw from a course after the final withdrawal deadline. A petition may be filed by the student to the Academic Actions Committee, who will consult the student’s Academic Advisor and instructor, as well as medical personnel where appropriate (with the student’s written permission) in cases of the following excused absences:

1. Death in the immediate family (parent or siblings), for up to one week.
2. Hospitalization for serious illness or medical problem/disability, for up to two weeks (for longer illnesses, a medical leave for the term may be granted, the procedures for which can be found in the Voluntary Withdrawal Policy).

### **Dropping a Course After the Deadline to Drop with a “W” Grade**

Generally, students will not be able to withdraw from a course after the final withdrawal deadline. A petition may be filed by the student to the Academic Actions Committee, who will consult the student’s Academic Advisor and instructor, as well as medical personnel where appropriate (with the student’s written permission) in cases of the following excused absences:

1. Death in the immediate family (parent/guardian, spouse, child or siblings)
2. Hospitalization for serious illness or medical problem/disability, for up to two weeks (for longer illnesses, a medical leave for the term may be granted, the procedures for which can be found in the Voluntary Withdrawal Policy).
3. Serious documented issues with the internet (in the instance of distance learning)?
4. National emergency (e.g. Political emergency)
5. Natural disaster (e.g. Severe earthquake, flood, etc.) causing accessibility issues for the internet
6. Radical disruption of communication (e.g. Power supply/blackouts)
7. Life-threatening circumstances (e.g. Threats by extremist groups, family, domestic)

If the University is operating online and/or engaged in distance learning, then the student should contact Academic Registry to access the associated form, which will need to be duly completed and sent via email to Academic Registry with a copy to the relevant faculty member and Academic Advisor within the pre-advertised deadline.

Students may not withdraw from more than one course with a 'W' grade per academic year unless there's an exceptional crisis, which will be determined by the Academic Actions Committee on an exceptional case-to-case basis.

### **Dropping a Thesis Halfway through the Year**

Students who have submitted paperwork to complete a thesis will be expected to finish up within one calendar year and/or the agreed upon date of completion on the form. Students who plan to drop the course must drop it within the designated periods to drop it during the Add/Drop Period or within the deadline to drop it with a "W" Grade.

### **Complete Withdrawal (all courses)**

If a student wishes to withdraw from all of her courses and discontinue her studies at AUW, she must initiate the complete withdrawal procedures listed below:

1. The student should write a formal written request to withdraw to the Associate Dean, elaborate her reasons for withdrawal. The student may be invited to a meeting with the department head.
2. If, after the meeting, the student wants to proceed with the complete withdrawal, she must complete the Student Withdrawal Form, which can be found at the Office of the Academic Registry and submit this form to her program head. The program head will then notify the Academic Registrar who will inform the relevant departments (e.g., Housekeeping/Library/Accounts).
3. After completing the Student Withdrawal Form, the student must complete a Clearance Form and obtain relevant signatures from each department. This form should be submitted to the Office of the Academic Registry, where the student can obtain relevant recommendations, certificates, and/or transcripts.

Students must initiate the above-listed procedure before the "last day to withdraw from a course with a "W" grade". In such cases, the student will receive grades of "W" on all courses she has registered for.

Students who do not follow the procedures outlined above will not be granted honorable dismissal and will receive grades of “WF” on all registered courses.

Students who withdraw from the University prior to completing their degree must pay for the expenses associated with leaving the campus, including all travel expenses.

Students seeking readmission to AUW after completely withdrawing must contact the Admissions Office and reapply.

## **Leave of Absence**

### **Voluntary Leave of Absence**

Students admitted to AUW are expected to make regular and consistent progress towards both achieving the learning outcomes for a course and the completion of their degree. However, AUW understands that students may experience medical situations that significantly limit their ability to function successfully or safely in their role as students. In such situations, AUW recommends that students consider requesting a voluntary leave of absence so that they can receive treatment and return to their studies fully able to mentally and physically achieve their academic and co-curricular goals.

A voluntary leave of absence cannot be used in lieu of disciplinary actions to address violations of AUW rules, regulations, or policies, even if the leave request coincides with the disciplinary process. A student permitted to take a voluntary leave of absence while on academic and/or disciplinary status will return on that same status.

In general, a voluntary leave of absence should be requested prior to the beginning of a term. If a student makes a request to temporarily withdraw from courses due to a medical reason while a term is in progress, she will receive grades of “W” if the leave request is approved.

In order to request a voluntary leave of absence, a student must submit the following to the Academic Registry:

1. A written letter of request from the student explaining her circumstances and consenting to release confidential medical information (as listed below) to AUW.
2. A signed, dated letter on letterhead from a medical care provider appropriate for the medical condition indicated. This letter should include a diagnosis of the condition, the symptoms, and the recommended treatment plan while the student is on leave. It should also confirm that the condition is serious enough to warrant a voluntary leave of absence.
3. Once the request is received, the Dean of Faculty & Academic Affairs will review and make a decision. Leave approval may require additional criteria, such as a meeting with the student’s Academic Advisor.
4. If the leave is approved, the student will need to complete a Student Clearance Form and return it to the Office of the Academic Registry prior to leaving campus. Like the Complete Withdrawal Form, the Student Clearance Form can only be collected during regular business hours, and usually takes up to three days to process.



5. The length of the Leave will be determined on a case-by-case basis, as each student's situation is unique. However, students are not allowed to take a leave of absence longer than one academic semester.

In general, students taking a voluntary leave of absence will be required to pay for the expenses associated with leaving and returning to campus, including all travel expenses. However, exceptions may be made on a case-by-case basis. Students seeking exception to this rule should write to the The Dean of Faculty and Academic Affairs.

### **Fee for Taking a Leave of Absence**

Students interested in taking a second leave of absence must pay a fee of USD \$100 (non-refundable) to retain their enrollment at the University. However students cannot take more than a total of two semesters off during their time as a student at AUW.

Students who are first year students in any program must also pay a non-refundable fee of \$500 to retain her admission if she would like to take a Leave of Absence in her first semester. Exceptions to this can be made by the Academic Actions Committee.

### **Returning From a Voluntary Leave of Absence**

When a student feels mentally and physically prepared to resume her studies at AUW, she must take the following steps to notify AUW of her readiness to return:

Contact the Academic Registry in writing, informing them of the student's intentions to return. This request must be submitted well in advance of the proposed return date at least 2 weeks before the start date of the semester a student is expected to return.

1. The student should submit a completed "Return from Leave" form to the Academic Registry.
2. Provide medical or psychological records from the physicians and/or mental health professionals who cared for the student while on Leave and/or a statement indicating the student's readiness to return. The student must also sign a written consent for the release of this information to AUW.
3. Sit for an assessment interview with the relevant program head and/or a staff member from the Health and Wellness Center.

Once a decision is reached regarding a student's return, it will be communicated to the student in writing by the Academic Registry.

### **Confidentiality**

AUW will maintain confidentiality of all the information submitted by a student in regards to a voluntary leave of absence, and all records will be kept confidential.

AUW reserves the right to notify a parent or guardian of the voluntary withdrawal if deemed appropriate under the circumstances.

## **Involuntary Withdrawal**

The following policy only applies when a student's observed conduct, actions, and/or statements indicate a direct threat to the student's own health and/or safety, or a direct threat to the health and/or safety of others. It is not meant to replace disciplinary proceedings associated with violations of a university policy, as it is not a disciplinary code, policy, or process. There may be situations in which both this Involuntary Withdrawal Policy and another university policy apply.

### **Criteria**

A student may be involuntarily withdrawn from AUW if the University determines that the student represents a direct threat to the health and safety of herself or others by (1) engaging or threatening to engage in behavior which poses a high probability of substantial harm to herself or others; or (2) engaging or threatening to engage in behavior which could cause significant property damage, would directly and substantially impede the lawful activities of others, or would interfere with the education process and the orderly operation of the University.

### **Procedure**

When a member of the AUW community, based on a student's conduct, actions, or statements, has reasonable cause to believe that the student meets one or more of the criteria for involuntary withdrawal, he or she should immediately file a report to the Dean of Faculty & Academic Affairs. If the Dean believes that there is substantial evidence to pursue the involuntary withdrawal, they may initiate an assessment of the student's ability to safely participate in the University's program, by first meeting with the student to:

1. Review available information concerning the behavior and/or incidents which have caused concern,
2. Provide the student with a copy of this Involuntary Withdrawal Policy and Procedure and discuss its contents with the student,
3. Provide the student an opportunity to explain her behavior, and
4. Discuss options available to the student, including counseling, voluntary withdrawal, and evaluation for involuntary withdrawal.

If the student agrees to withdraw voluntarily from the University and waives any right to any further procedures available under this policy, the student will be given a grade of "W" for all courses, will be advised in writing of any conditions that must be satisfied prior to re-enrollment, and may be referred to appropriate mental health or other health services. The student will be responsible for paying for any expenses associated with leaving or returning to campus, though exceptions may be made on a case-by-case basis. If an exception is granted, it will be done with the understanding that the student will be responsible for the expenses associated with returning to AUW after she is re-enrolled, and for leaving AUW after she completes her degree requirements.

If the student refuses to withdraw voluntarily from the University, and the Dean of Faculty & Academic Affairs continue to have reasonable cause to believe the student meets one or more of the criteria for involuntary withdrawal, they may require the student to be evaluated by an appropriate mental health professional.

### **Mental Health Evaluation**

The Dean of Faculty and Academic Affairs may refer the student for a mandatory evaluation by an appropriate mental health professional or other appropriate professional. The professional may be selected by the University, so long as there is no cost to the student for the evaluation. A written copy of the involuntary referral shall be provided to the student.

The evaluation must be completed within five days after the date the referral letter is provided to the student. Prior to the evaluation, the student will be required to sign a written authorization authorizing the exchange of relevant information among the mental health professional(s) (or other professional) and the University. Upon completion of the evaluation, copies of the evaluation report will be provided to the Dean of Faculty & Academic Affairs.

The professional making the evaluation shall make an individualized and objective assessment of the student's ability to safely complete her studies at AUW, based on a reasonable professional judgment relying on the most current professional knowledge and/or the best available objective evidence. This assessment shall include a determination of the nature, duration and severity of the risk posed by the student to the health or safety of herself or others, the probability that the potentially threatening injury will actually occur, and whether reasonable modifications of policies, practices or procedures will sufficiently mitigate the risk. The professional will, with appropriate authorization, share his/ her recommendation with the Dean of Faculty and Academic Affairs, who will take this recommendation into consideration in determining whether the student should be involuntarily withdrawn from AUW. A copy of the professional's recommendation will be provided to the student, unless, in the opinion of the professional, it would be damaging to the student to do so.

If the evaluation results in a determination that the student's continued attendance presents no significant risk to the health or safety of the student or others, and no significant threat to property, to the lawful activities of others, or to the educational processes and orderly operations of the University, no further action shall be taken to withdraw the student from the University.

If the evaluation results in a determination that the continued attendance of the student presents a significant risk to the health or safety of the student or others, such that there is a high probability of substantial harm, or a significant threat to property, to the lawful activities of others, or to the educational processes and orderly operations of the University, the student may be involuntarily withdrawn from the University. In such an event, the student shall be informed in writing by the Dean of Faculty & Academic Affairs of the involuntary withdrawal, of her right to an informal hearing, of her right to appeal the decision of the hearing board, and of any conditions necessary for re-enrollment. The Dean of Faculty & Academic Affairs will also inform the student's parents of the situation.

If the student does not wish to pursue an informal hearing, she will have to leave the AUW campus at the earliest possible time. The student will be responsible for paying for any expenses associated with leaving or returning to campus, though exceptions may be made on a case-by-case basis. If an exception is granted, it will be done with the understanding that the student will be responsible for the expenses associated with returning to AUW after she is re-enrolled, and for leaving AUW after she completes her degree requirements.

In most cases, a student who is involuntarily withdrawn will be given a grade of W in all courses in which she is currently enrolled.

## **Informal Hearing**

A student who has been involuntarily withdrawn may request an informal hearing before a hearing board by submitting a written request to be heard within two business days from receipt of the notice of involuntary withdrawal. A hearing will be set as soon as possible. The student shall remain involuntarily suspended pending completion of the hearing.

The hearing shall be informal and non-adversarial. During the hearing, the student may present relevant information and may be advised and supported by another student or faculty member.

At the conclusion of the hearing, the hearing board shall decide whether to uphold the involuntary withdrawal or whether to reconsider, and the student shall be provided written notice of the hearing officer's decision as soon as possible.

## **Emergency Suspension**

The University may take emergency actions to suspend a student pending a final decision on whether the student will be involuntarily withdrawn, in situations in which:

- There is imminent danger of serious physical harm to the student or others,
- There is imminent danger of significant property damage,
- The student is unable or unwilling to meet with the Dean of Faculty & Academic Affairs,
- The student refuses to complete the mandatory evaluation, or
- The University Registrar, after conferring with the Vice Chancellor, determines that other exceptional circumstances exist to warrant suspension.

In the event emergency action is taken to suspend the student on an interim basis, the student shall be given notice of the emergency suspension and an initial opportunity to address the circumstances on which the emergency suspension is based. While on emergency suspension, the student will be required to stay in the Health and Wellness Center. Emergency suspensions will be carried out in accordance with the University Student Disciplinary Procedure.

## **Conditions for Re-enrollment**

Because this Involuntary Withdrawal Policy applies to cases in which there is a concern about the safety of the student or others, the Dean of Faculty and Academic Affairs may require a student who has been involuntarily withdrawn under this Policy to be reevaluated before she is readmitted in order to assure that she presents no direct threat to herself or others. Otherwise, students should follow the same procedures for re-enrollment as for returning from a Voluntary Leave of Absence

### **Unauthorized Leave of Absence or Withdrawal**

Students who leave the University temporarily or permanently without completing paperwork, acquiring clearance from all relevant departments, or informing relevant personnel will automatically receive an F in all courses for that semester. In addition, she will be reported to the AAC, who can place the student on Probation and strip her studentship for that Semester. If the student does not, in writing, indicate her return date within a reasonable time frame of 2-4 weeks, then the student is assumed to be a withdrawn

student. This student is then ineligible to render any services from AUW, including but not limited to official letters, recommendations, professional opportunities, consultation services, and more. She must settle her dues to obtain any official transcripts or letters of enrollment, which will include her poor standing with the University.

The student's University issued e-mail address shall be suspended after the deadline for the student to respond to any initial communication from AAC, faculty and/or staff.

Exceptions to the stipulations listed above can be made only if relevant evidence is submitted, reviewed and accepted by the AAC.

## **Policy on Co-curricular Activities**

### **Student Summer Research Projects**

AUW actively encourages its students to undertake a variety of co-curricular activities, both during the semester, and in the summer. More specifically, Summer Projects are any kind of exploration aiming to fulfill most or all of the objectives set out below, and may be in the form of oral history, research, translation, documentary production, creative writing, or the creation of a blog about a focused topic. All students are strongly encouraged to undertake a Summer Project after their first year of undergraduate studies.

The objectives of Summer Projects are to:

- Apply academic learning to summer projects in a community or laboratory setting;
- Increase students' capacity for bridging intellectual and practical tasks, giving them opportunities to reflect on their summer project work experience and connect it with their classroom learning and intellectual growth;
- Contribute to helping understand and possibly bring new ideas or service to local issues/phenomena,
- possibly as part of a collaborative research experience;
- Provide students with professional training, coaching and experience;
- Practice English throughout the summer in oral and written communication with classmates and supervising professor;
- Help students (and the university) build substantive relationships with external entities.

Each Summer Project has one or more UG faculty advisors, and involves at least one student. Projects may be proposed in any of the AUW countries. Topics in the past have included International River Politics and Sustainable Development in China; Promoting Basketball among Young Girls in Nepal; Street Vendors and Urban Spaces; Social Networks and NGOs; Heritage and Conservation in Chittagong; Reflections of International Peace Keeping Forces; Voluntary Teaching in a Primary School in Rural Yunnan, China; Infant Feeding Interventions to Combat Malnutrition; and Population Status of the Bostami Turtle.

### **Proposing Summer Projects**

Summer Projects can be designed and proposed by UG students who have identified and worked with a faculty advisor, or by UG faculty themselves. Faculty who are not returning next year may co-advise a summer project with a returning faculty who will manage the Summer Project Showcase activities in the Fall Semester.

All proposals should include the following components, following the format of the Summer Project Proposal Form:

- a) Project Title
- b) Name(s) of advisor(s) and names and number of students expected to participate (if known)
- c) Project Overview: A description of the project, including background, aims, activities, location(s), field partners, supervision, etc. as apply
- d) Objectives & Learning Outcomes: Identify the learning, research, and/or service objectives to be met/achieved by project.
- e) Expected Project Outputs by Students: Report, service, documentary, etc.
- f) Contribution(s) to AUW: Explain how the project will be shared with the AUW or wider community (e.g. a report, documentary, personal essay, etc.)
- g) Schedule/Timeline

### **Submitting Proposals and Funding**

A designated Faculty Committee will be formed each year to organize and evaluate the Summer Project proposals. Students whose proposals have been approved, will be required to participate in a seminar on ethical research.

A schedule and application guidelines will be provided by the Committee in March/April of each academic year.

Funding for Student Summer Research Projects is determined on an annual basis and may not cover all expenses related to the project. Students are encouraged to seek additional resources or design the research project based on cost-sharing, within the allocated annual budget. The funds provided may be used only for student research activities. Faculty wishing to participate in the project may utilize their individual research fund allocation.

### **Internship for Credit**

Students may choose to complete a short internship for academic credit by requesting a faculty member who is willing to supervise the student during the time period of the internship. Students interested to do this will need to review the learning objectives of the internship as applicable to the academic category the internship is being applied for. The faculty supervisor must ensure that the project has a significant assessment component to be eligible to receive credit. Internships for credit must be between 1-4 credits.

This process will need to be documented in writing via the relevant form(s) and be pre-approved by the Program Head. All documents must be completed and submitted before the student commences the internship.

### **Senior Thesis**

The Senior Thesis is a mandatory or elective component of some Degree Programs, as indicated in the Program Curriculum. Students who select majors with a mandatory Senior Thesis would be advised to begin their research projects as part of the Summer Research Projects scheme. Unless otherwise advised

by the program head, the Senior Thesis project should evolve from the primary field of study (the Major) and should include a substantial research component.

The Senior Thesis may take the form of a mandatory Thesis Seminar or a Senior Thesis Course, each worth 4-8 credits in total, in completion of the graduation requirements of the program. Theses must be graded per the grading policy of AUW, however, it cannot be taken for Pass/Fail.

The Senior Thesis must be supervised by a faculty member from the student's selected Major. Faculty from other majors or minors may serve as Co-supervisors.

The Senior Thesis must be approved by the program head to be considered and registered on the student's transcript.

Please also review individual major program sections in this document to review senior thesis requirements (as applicable).

## Academic Resources

### Academic Advising

All students at AUW receive academic advising support throughout their course of study. Students should work together with their advisers to plan carefully and thoughtfully their schedules and curricula. Students are required to meet formally with the Academic Registry and their adviser prior to course registration in any given term.

New Access Academy students are assigned an Access Academy faculty member as their adviser for their first year. In the spring, prior to registration for summer/fall classes, Access students will be assigned a UG faculty adviser with whom she will plan her UG curriculum. This faculty member will be her adviser until she declares a major in the spring of her UG1 year. Direct entry Undergraduate students will be assigned an academic adviser from among the UG faculty immediately. Once a student has declared a major course of study she will be assigned an academic adviser in the relevant program by the Dean and/or Academic Registry. That faculty member will remain the student's adviser until her graduation and will lead her through her upper-division course of studies. Should an adviser leave AUW, students will be assigned to a new adviser. Students will also meet regularly with the Academic Registry who will maintain an audit of the student's progress in completion of requirements for the core, a major, minor (if applicable) and graduation.

Students may request assignment to a specific major adviser; but that adviser must approve the addition of the student to his/her advising roster. Requests for specific assignments must be made to the Dean of the Faculty or the Program Head.

A successful advising relationship relies on both student and adviser meeting their respective responsibilities.

| <b>STUDENT Responsibility</b>   | <b>ADVISER Responsibility</b>  |
|---|--|
| Become knowledgeable about your major and its requirements.   | Help your advisee become knowledgeable about their major and its requirements  |
| Make and keep an appointment with your adviser at the beginning and middle of each term.                                    | Be available for appointments with your advisee at the beginning and middle of each term.                              |
| Prepare for your appointment- bring your grade sheets, assignments etc if required.   | Help with course selection and check class scheduling. Confer with faculty teaching the advisees' courses if required. |
| Ask for help when you need it, and in a timely manner.  | Discuss any problems with your advisee and make referrals if required.   |
| Recognize many of your problems cannot be solved without your action.   | Assist your advisee in deciding on solutions to their problems.  |
| Make decisions regarding your academic and career goals that are consistent with your interests, abilities and limitations. | Discuss career goals with your advisee, and assist in making choices at AUW that will help them achieve those goals.   |



|  |  |
|--|--|
| Create plans to fulfill your goals, and be prepared to review your plans in the future | Help your advisee create their plans; review plans and suggest alternatives if required. |
| Seek and take advantage of resources to enhance your education and career goals.       | Refer your advisee to appropriate people and information on resources and opportunities. |
| Act in an ethical, responsible, and professional manner.                               |  |

## Peer Tutoring Services

Students who are struggling with their coursework can request a peer tutor through their course instructor. The course instructor will work with the Office of Student Affairs' Work-Study Program to hire a suitable tutor.

## The Writing Center

The AUW Writing Center works with all students at any time during the writing process, providing one-on-one instruction and small-group workshops to enable students to become better writers.

Our Philosophy. We approach writing as a process, not a product. We seek to make better writers, not just better writing. By improving student writing ability across the curriculum, we work to advance students' critical thinking skills and self-sufficiency as writers.

What we can do for you. The Center is staffed by tutors who have been trained to work with writers at all levels, emphasizing second language learning skills. We work with you, not for you, and we work on so much more than just writing!

We do not edit or proofread papers. Instead, we aim to provide students with the proofreading skills and correct grammar that will allow them to succeed independently as writers. While we acknowledge the need for students to master the rules of written English, we believe that students learn these skills best by working on their own writing.

We work in many different ways:

- Exploring the expectations of academic writing.
- Finding new ways (new words, phrases, and sentence structures) to say old things. Bringing about your understanding of yourself as a writer.
- Developing effective problem-solving strategies.

Do plan ahead, come when you start writing or with a first draft, and bring your questions or an agenda to the conference. Don't expect to work on too many issues at once or come at the last minute—you'll be stressed and so will your tutor!

How to make an appointment: Appointments for individual conferences with writing tutors can be made a week in advance or the day-of by visiting our front desk. You may sign up for a 60-minute or 30-minute

appointment. If you are more than 5 minutes late, your appointment will count as missed. To cancel an appointment, email the Writing Center at [writingcenter@auw.edu.bd](mailto:writingcenter@auw.edu.bd) by 10 am the day of your appointment. If you miss an appointment without cancelling beforehand, you will receive a warning after the second time. If you do not show up for three sessions during the semester without cancelling, you will lose the privilege of reserving appointments ahead of time; you will only be able to have walk-in appointments.

If you wish to meet with a tutor on a regular basis, you may sign up for the Weeklies program, which allows students to work with the same tutor every week during the semester. Senior Thesis students may also request a Weekly session. Tutors will focus on aiding a student's overall writing process.

Workshops: We offer workshops every month on various topics under Academic Writing and Research, Creative Writing and Writing for Business and Communication as well as on improving Study Skills.

In-Class Presentations: Instructors may request a tailored class presentation delivered during class time on such topics as Citation Use, Group Projects, Writing Formats.

We also support faculty and staff writing needs with special workshops and individual tutoring sessions.

Resources: Along with weekly writing skills workshops, the Writing Center has handouts and other writing resources, such as learner's dictionaries, citation guides, and writer's handbooks, to aid students in their writing.

Location: 20H, Room 405

Website: <https://auwwritingcenter.wordpress.com/>

## **Science & Math Center**

Learning and understanding science and mathematics are essential in the liberal arts education framework because it prepares students with the proper mindset and skills to solve, analyze, and understand real life problems. The mission of AUW Science & Math Center (SMC) is to help all the students who have difficulty in solving scientific and mathematical problems in their courses and to provide a safe space among peers for the ease of learning. These students would improve the logical and problem-solving skills that will help them succeed in their respective careers. Such learning support is extra, optional, and non-compulsory and is designed to assist students in developing scientific and mathematical abilities to reach their academic and career-oriented goals.

The goals for the students who enlist the help of the SMC are as follows:

- To confidently solve real world applications of their respective major by achieving a better understanding of basic scientific, mathematical and statistical concepts.
- To enhance quantitative reasoning and literacy.
- To draw connections between science, math and upper level application courses.
- To develop soft skills that can be used in the classroom and the workplace.
- To boost self-confidence.

# Policy on Discrimination, Harassment and Sexual Misconduct

## Overview

AUW is committed to providing a safe and supportive environment for all its members. The university strives to ensure a place of work and study free of sexual harassment. As stipulated in the mission of AUW, we are committed to providing a vibrant and diverse residential learning community where highly talented women and those with uncommon potential from many cultural and religious backgrounds can grow both intellectually and personally; Sexual harassment violates the core values of AUW. This policy aims to protect every individual at AUW regardless of gender, religion, sexual orientation, and ethnic group.

Establishment of a committee to deal with Discrimination, Harassment & Sexual Misconduct

The University will appoint a committee which receives and resolves complaints of discrimination, harassment, and sexual misconduct from students, employees, and others. To file a complaint of discrimination, harassment, or sexual misconduct, contact the committee chair, selected each year by the committee. Subcommittees to address each complaint will be formed of at least one faculty, one staff, and one student member, each of whom has no substantial prior interaction with the person reporting misconduct.

## Nondiscrimination Policy

AUW Nondiscrimination Policy prohibits acts of discrimination and harassment by members of the campus community. Furthermore, even if these acts are not illegal, conduct is prohibited if it discriminates against any University community members through inappropriate limitations of access to, or participation in, educational, employment, athletic, social, cultural, or other University activities on the basis of the University community member's protected class status.

## Misconduct Policy

Misconduct, as defined by this Policy, includes, inappropriate behavior including but not limited to, behavior regarding any one or a combination of the following:

- Sex
- Sex-based stereotypes
- Sexual orientation
- Transgender status
- Age
- Color
- Disability
- Ethnicity
- Gender
- Gender expression

- Gender identity
- Genetic information
- Height
- Marital status
- National origin
- Political persuasion
- Pregnancy, childbirth, or other medical status
- Race
- Religion
- Weight

**Location of Misconduct:**

- a) On-campus. This Policy prohibits acts of misconduct anywhere on-campus involving a University community member.
- b) Off-campus. This Policy prohibits acts of misconduct occurring off-campus if the sexual misconduct affects a University community member's participation in an AUW activity.
- c) This includes, but is not limited to, if the misconduct:
  - involves conduct directed at a University member that affects the member's participation in a
  - AUW activity including the living, learning, and working environments;
  - involves conduct exploiting the vulnerable position of one of the parties;
  - occurs at a AUW campus location or during a campus class or activity;
  - occurs during AUW-sponsored activities (e.g., field trips, social or educational functions, athletic competitions, student recruitment activities, internships, and service learning experiences);
  - occurs during the activities of organizations affiliated with AUW, including, but not limited to, the activities of registered student organizations;
  - occurs during a AUW-affiliated study abroad program or other AUW-affiliated travel;
  - occurs during the application for admission to a program or selection for employment; or
  - poses a disruption or threat to a University community member, even if that community member is not the direct target of misconduct or sexual misconduct. (for example, if behavior, even consensual, makes a student feel like there might be favoritism or prejudice occurring).

The following list is prohibited:

**A. Discrimination**

Discrimination is favorable or unfavorable treatment of an individual because of their protected class status (e.g. age, color, disability, familial status, etc.). Discrimination can also include failing to provide an individual with a reasonable accommodation for a disability.

**B. Harassment**

Harassment is subjectively unwelcome conduct or communication regarding, or on the basis of, a protected class status (e.g. age, color, disability, familial status, etc.) that creates an objectively intimidating, hostile, or abusive environment with respect to an individual's education, employment, housing, access to public accommodations, public services, or telecommunications. In considering whether or not actions created an objectively hostile environment, the severity and pervasiveness of the actions are considered.

**C. Threats**

Threats or abusive statements or actions made by a member of the University community toward another individual based upon that other individual's actual or perceived protected class status. This might be conscious threats, such as bullying, or may include negligent endangerment of a community member, through, for example, posting pictures of private activities to a public forum such as Facebook or Snapchat, where unintended consequences might follow for a particular community member.

#### **D. Intimidation**

Conduct by a member of the University Community which maliciously and with specific intent to intimidate or harass another person because of that person's protected class status and which:

1. Makes physical contact with another person; or
2. Damages or defaces any property of another person; or
3. Threatens by word or act to do one of the above if there is a reasonable cause to believe that such an act will occur

#### **E. Assault**

Conduct by a member of the University Community which maliciously and with specific intent to harm another person because of that person's protected class status and which:

1. Makes physical contact with another person; or
2. Damages or defaces any property of another person; or
3. Threatens by word or act to do one of the above if there is a reasonable cause to believe that such an act will occur.

### **Sexual Misconduct Policy**

Sexual Misconduct, as defined by this Policy, includes, inappropriate behavior which meets the standard for

Misconduct, but includes (but is not limited to) behavior regarding the following:

- Unwelcome touching
- Unwelcome implications that touching might occur
- Physical intimidation
- Unwelcome sexual language
- Unwelcome sexualization of situations

#### **Sexual Harassment**

Sexual Harassment means sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature where:

- submission to such conduct is made either explicitly or implicitly a condition of a Complainant's employment or academic standing;
- submission to or rejection of such conduct is used as the basis for employment decisions or for academic evaluation, grades, or advancement; or
- such conduct has the purpose or effect of unreasonably interfering with a Complainant's work or academic performance, or creating an intimidating or hostile environment regarding education, employment, housing, or participation in AUW activities.

#### **Stalking**

Stalking means a course of conduct directed at a specific Complainant that would cause a reasonable person to fear for that person's own or someone else's safety, or to suffer substantial emotional distress.

Substantial emotional distress means significant mental suffering or anguish that may, but does not necessarily, require medical or other professional treatment or counseling

### **Retaliation**

The University's policy on harassment and sexual harassment prohibits retaliation. Retaliation is an adverse action taken against a covered individual because they: complained of discrimination, harassment, or sexual misconduct; cooperated in an investigation; or participated in proceedings brought under these policies. Adverse actions may include: lowering grades; bad letter of recommendation; discipline; salary reduction; negative performance appraisal; or change in job duties.

### **Responsible Employees & Mandatory Reporting**

All University employees, including graduate assistants and fellows, are "Responsible Employees." Responsible Employees are required to share information regarding the alleged sexual misconduct known to them, including the names of the individuals involved in the alleged Sexual Misconduct, if known, with the chair of the committee, or designee.

Individuals that are unsure if they need to report a concern to the Committee should contact the University's designated chair for further discussion.

### **Complaint/Concern Resolution/Procedure**

The Misconduct and the Sexual Misconduct Policy establish procedures for the resolution of complaints and concerns arising under those policies. Under these complaint resolution processes, an investigation is commenced with either an informal complaint or the filing of a formal written complaint. Informal resolution (e.g. mediation) may be available under certain circumstances; however, there may be situations where informal resolution is inappropriate (e.g. allegations of sexual assault). Attempts at informal resolution are not required before the filing of a formal written complaint and the commencement of a formal investigation.

The principle goal of the policy is to establish a scholarly environment conducive to student learning and a workplace free from discrimination, harassment, and sexual misconduct. In light of that, all community members need to feel free to come forward to discuss concerns with no fear of backlash or reprisal, even if they are unsure of the severity of the harassment or discrimination which may have occurred. A community member does not need to be the direct target of inappropriate behavior to be affected by inappropriate behavior, and third-party reports should be considered.

Therefore, the most common interim measures and accommodations available are non-punitive "no contact" orders on campus and modifications of work or class assignments. An individual does not need to file a formal complaint with the University or law enforcement to receive a reasonably available accommodation, such as a no-contact order.

If a criminal act is alleged, the complainant will be strongly encouraged to use the formal legal process, and not restrict complaints to the University committee. The University committee will assist and support in these cases.

Additionally or in lieu of non-punitive no-contact orders or formal criminal investigation, a formal University investigation process will be available. A formal investigation is carried out by an investigating

subcommittee formed from the Committee, or in some cases calling on community members from outside the committee. Subcommittees to address each complaint will be formed of at least one faculty, one staff, and one student member, each of whom has no substantial prior interaction with the person reporting misconduct. The investigating subcommittee will interview the parties and any witnesses. Prior to interviewing the responding, or accused, party, they are provided notice of the complaint filed against them, including a copy of the written complaint. In some cases, if judged appropriate and necessary, the complaint may be anonymized. The parties may submit written statements or other physical evidence to the investigator. The investigator may also independently secure evidence. After the completion of the investigation, the investigator prepares a written report, referred to as a Determination that includes a summary of the evidence reviewed, a statement of the applicable University policies, an analysis of the evidence as it relates to those policies, findings of fact related to the evidence, and, ultimately, a conclusion as to whether or not a policy violation occurred.

Under the complaint resolution procedures of the University, the burden of proof is decided by a "preponderance of the evidence" that is presented by the individual filing the complaint that a policy violation has occurred. As such, the evidence must show that it is more likely that a violation did occur than that a violation did not occur.

In the event a policy violation is found to have occurred, the investigator will forward the Determination to the appropriate University official for discipline or sanctioning. The committee does not have the authority to discipline individuals; however, as part of the investigative report, the investigator will make recommendations as to appropriate discipline and interventions as to stop the discrimination, harassment, or sexual misconduct, address its effects, and prevent its recurrence.

All complaint resolution and sanctioning processes are also carried out in accordance with the applicable employee handbooks.

#### **Privacy & Confidentiality**

Under this Policy, the private nature of information provided to the committee and/or the committee chair will be accorded the utmost respect. However, there may be times where information received by the committee may be disclosed. These circumstances are outlined in both policies, and include, but are not limited to the following situations:

- i. to the extent necessary to eliminate the alleged discrimination, harassment, or sexual misconduct;
- ii. to the extent necessary to remedy the effects of the alleged discrimination, harassment, or sexual misconduct;
- iii. to the extent necessary to complete an investigation in to the alleged discrimination, harassment, or sexual misconduct;
- iv. to the extent necessary to complete any disciplinary processes related to an investigation carried out by committee; or

#### **Resource Information**

In addition to the committee, there are other resources available to individuals subject to discrimination, harassment, and sexual misconduct both on campus and in the local community. The committee and committee chair will gather that information and have it readily available for community members.

## **Social Media Policy for AUW Students**

Adopted by Academic Council May 2018

The following policy has been developed to give guidance and direction to students on the use of social media while studying at the Asian University for Women (AUW). Students should be aware that the same standards that apply for interacting within and outside the AUW Community in real life also apply online. The same respect, courtesy, and professionalism expected in real life interactions should be displayed online.

This policy applies to all students and to any personal communications on a social media platform which directly or indirectly reference AUW. This policy applies to social media communications made at any time, whether privately or publicly, and from anywhere, including away from campus and on personal devices, whether to an individual, to a limited group or to the world.

Nothing in this policy is intended to have the effect of limiting either freedom of speech or academic freedom.

For the purpose of this policy, social media is defined as any online interactive tool which encourages users to create and share content or to participate in social networking. Examples of some widely used social media are Facebook, Flickr, Instagram, YouTube, LinkedIn, Snapchat, Twitter, blogs, discussion forums, instant messaging, or any website which allows public commenting or posting.

### **Social Media and Its Use**

#### **Expected Standards of Behavior**

Students are personally responsible for what they communicate on or through social media. Communications on social media must be respectful at all times and in accordance with this policy. Use of social media must not infringe on the rights, or privacy of other students, or staff and students must not make derogatory comments or judgments about other students, staff or third parties. Students must take particular care when such communications on social media can identify them as students of Asian University for Women to members of staff, other students, or other individuals. All use of social media must comply with the AUW's policies, including:

1. Student Code of Conduct
2. Policy on Responsible Use of AUW Computing Resources
3. Computing on Campus

The following non-exhaustive list may be considered to be of an unacceptable nature and are prohibited from being posted:

1. confidential information (which may include research not yet in the public domain, information about fellow students or staff or personal matters, non-public or not yet approved documents or information);
2. engage in personal/confidential information discussed during a class
3. vilifying any student for their opinions etc. expressed in class.
4. details of complaints and/or legal proceedings/potential legal proceedings involving AUW;
5. personal information about another individual, including contact information, photos, videos, without their expressed permission;
6. comments or remarks from fake accounts or using another person's name without their consent;
7. material, including images, that is threatening, harassing, discriminatory, illegal, obscene, indecent, defamatory, or hostile towards any individual or entity;



8. any other posting that constitutes a criminal offence;
9. anything which may bring AUW into disrepute or compromise the safety or reputation of colleagues, former colleagues, students, staff and those connected with the University

### **Roles and responsibilities**

All students are responsible for:

- ensuring that any use of social media is carried out in line with this and other relevant policies;
- informing the relevant staff member(s) when an institutional account is to be used;
- seeking relevant authorization for official posts prior to publication;
- regularly monitoring, updating and managing content that is being posted

### **Social Media for Educational Purpose**

Where social media is used as a teaching and learning tool through official AUW websites and accounts, all students must read, understand and agree to the terms of use of the social media website and the University's terms and conditions relating to the use of social media in this context before accessing and posting content on social media in a teaching and learning context.

### **Social Media for Personal Use**

AUW acknowledges that students may use social media in their private lives and for personal communications. Personal communications are those made on, or from, a private social media account, such as a personal page on Facebook or a personal blog. In all cases where a private social media account is used which identifies the University, it must be made clear that the account holder is a student at the University to avoid the impression that views expressed on or through that social media account are made on behalf of the University.

As a student you should be aware of your association with and responsibilities to AUW, and ensure that your profiles and related content are consistent with AUW's policies, including but not limited to, data protection, dignity, electronic mail usage.

You must also be aware of the potential impact of anything which you post online. Therefore, you should avoid posting anything online that:

- ☐ you would otherwise not wish to be in the public domain
- ☐ you would not be willing to say personally to an individual

You should also be aware that any digital material that you post online could reach a wider audience than you would have expected or intended. Once digital content has been created and shared, you will have limited control over its permanence and audience.

### **Cyber Bullying via Social Media**

AUW has zero tolerance policy towards any form of bullying or harassment by or of members of University staff or students. The following examples illustrate the types of behavior, displayed through social media communications, which the University considers to be forms of cyber bullying:

- Malicious libeling, spreading rumors, lies, intimidating, offensive or threatening comments via internet on any social platform
- Derogatory and humiliating comments, remarks through e mail, text message, Facebook posts etc with the intent to harass or humiliate a student, staff or any other person of AUW.

Any student who is experiencing cyber bullying by another student or a member of the University staff, will have full support of the University.

Refer to the Student Handbook under the Disciplinary Procedures for Violating University Policy.

### **Intellectual Property**

- All students must ensure that they have permission to share any third party materials, including all images, photographs, text and videos, before uploading them or linking to them via social media and, where sharing is permitted, should ensure that such materials or shared links are credited appropriately.
- In addition, all students must check the terms and conditions of a social media account and/or website before uploading material on it; by posting material to social media accounts and/or websites, you may be releasing ownership rights and control of the content. For this reason, you must exercise caution in sharing all information.
- AUW is not responsible for, nor does it hold any ownership, of any content posted by its students, other than content posted by students using University accounts, or in the course of their duties, as a form of professional communication.

### **Brand**

AUW's name, identity and logo may only be used in accordance with the University's brand guidelines.

### **Monitoring**

AUW reserves the right to monitor, without further notice, student activities using its IT resources and communications systems, including but not limited to social media postings, to ensure that its rules are being complied with and such activities are for legitimate purposes.

### **Reporting**

Any complaints received under this policy will be reported, on an anonymized basis where appropriate, to the relevant body within the University.

### **Breach**

Any breach of this policy may result in disciplinary action. Disciplinary action will be taken in accordance with the procedures outlined in the Student Handbook. Disciplinary action may be taken regardless of when the breach is committed and regardless of whether any University equipment or facilities have been used in committing the breach. Where conduct may be an illegal criminal offence, the University may report the matter to the police

The procedure applies to all students enrolled at AUW, including Pathways, Access Academy and Undergraduate)

## **Procedure for Victims of Harassment and Bullying**

1 AUW opposes harassment and bullying in any form. Harassment and bullying lead to a stressful and potentially hostile environment. The University is committed to respect for the dignity of each person. The University Executive and each member of the AUW community is responsible for avoiding and counteracting harassment and bullying.

2 Definition of harassment

a) Harassment is unwelcome behavior that could reasonably be taken by the recipient as demeaning or creating an intimidating, hostile, degrading, humiliating or offensive environment. Harassment may include behavior relating to:

- Gender
- Ethnicity
- Color
- Disability
- Religion
- Nationality
- Age
- Occupation
- Marital status
- Sexual orientation
- Other personal characteristics

b) The following is a list of examples of harassment or bullying although it is not exhaustive.:

- Bullying
- Abuse through-mail or electronic media
- Telling jokes in bad taste
- Displaying offensive material in any form
- Written abuse
- Sarcasm and ridicule
- Undermining someone
- Verbal or written comments that are offensive; spreading malicious rumors, or insulting someone
- Sending copies of communications that are critical of someone to others who do not need to know
- Victimization
- Unfair treatment
- Lewd, suggestive or overly familiar behavior eg touching, standing too close or unwelcome sexual advances
- Displaying or circulating sexually suggestive material
- Criminal acts such as physical or sexual assault
- Abuse of power
- Threats

### **3 What to do if you think you are suffering from harassment or bullying**

3.1 It is advisable to keep a record of incidents.

#### **3.2 Informal action**

If you feel able, tell the person concerned that you find the behavior unacceptable. You may, otherwise, contact the Head of Programs, the Dean of Faculty or the Head of Department, to ask for help to resolve the issue.

### 3.3 Formal action

You may raise the issue with the university authorities through the **Student Complaints Procedure** under Stage two (formal investigation by a panel).

It may be necessary to take formal disciplinary action in a case where a complaint of harassment is upheld.

The University has to recognize that sometimes complaints are made with mischievous or malicious intent and this can create grounds for the dismissal of a complaint or for disciplinary action.

### 3.4 Sources of support for students

Confidential support is available from the Dean of Students, who will listen to your concerns and help you take appropriate action to deal with cases of harassment. You may also approach the Student Government. All matters will be addressed confidentially. No further action taken without your permission. unless, exceptionally, there is an unacceptable risk to you or others, in which case who will be informed of the course of action and offered the opportunity to be involved.

### 3.5 Confidentiality

Every effort will be made to keep the matter confidential to those directly involved. Breaches of confidentiality may result in disciplinary action.

### 3.6 Serious Incidents

In the event of physical and sexual assault, or where you feel your personal safety is at risk, you should not delay taking immediate action. You should report such incidents as soon as possible to the Director of Security.

## Student Disciplinary Procedures

(Approved by Academic Council: 18 April 2019)

The procedure applies to all students enrolled at AUW, including Pathways, Access Academy and Undergraduate)

## **1 Introduction**

- 1.1 The University has an obligation to care for its members and maintain its reputation, values and standards that complement the University's mission.
- 1.2 The University seeks to operate fair, transparent, practicable procedures that promote the swift and confidential resolution of issues, whilst allowing reasonable time for investigation and for students to prepare their cases.
- 1.3 Academic offences are addressed through a process overseen by the Academic Actions Committee.

## **2 Requirements for student conduct**

- 2.1 Students are expected to:
  - support the good name of the University and to act in a manner that contributes to a safe and productive environment at AUW, in which respect, tolerance, diversity and inclusiveness are valued, in order to ensure the fulfilment of its mission.
  - meet obligations to be aware of and to comply with university regulations, policies and codes of conduct
  - respect local cultural sensibilities and abide by national laws and restrictions
- 2.2 The Student Disciplinary Procedure may be used to address an conduct that may bring the University into disrepute or have any adverse effect on the proper functioning of the University, including but not limited to the safety, rights or property of the students, faculty, staff, visitors, contractors of AUW
- 2.3 The following list of examples of misconduct is not exhaustive:
  - engaging in any conduct which prevents, obstructs or disrupts the university's activities or is intended to have that effect:
  - behavior which may bring the University into disrepute:
  - obstructing or attempting to obstruct the access of staff, students, or members of the public who enter with the permission of the university authorities:
  - assaulting, harassing, bullying or otherwise threatening any AUW student, staff, or faculty:
  - Misusing or damaging any property (including damage by negligence) equipment, furniture, fittings, instruments or property belonging to or under the control of the University or belonging to any member of staff or student of the University or its contractors or visitors:

- Misusing or misappropriating the funds or other assets of the University:
- Invading or abusing or attempting to invade or abuse the confidentiality or integrity of any files or confidential material held by the University, including information on the computer systems:
- Breaking the University's regulations on the use of drugs, smoking and alcohol:
- Conviction of any criminal offence that may damage the good name of the University or conduct on the University's premises that would amount to a legal offence had such behavior occurred in a public place:
- Any action likely to cause injury or distress to any person or to the University:
- Impairing the safety and security of people on university premises:
- Taking part in trespass or unauthorized occupation of any part of the University premises:
- Committing or being party to a fraudulent or dishonest act with regard to the University. This includes unfounded and malicious allegations against a member of staff:
- Failure to disclose information about a criminal record which may be relevant to the University:
- Breaching the University's policies on the possession or use of alcohol or drugs:
- A breach of residential accommodation rules:
- Failure to comply with a penalty imposed previously within the terms of the Student Disciplinary Procedure:
- Committing any other breach of the regulations, rules, policies or codes of practice of the University or failing to observe a reasonable instruction from an authorized officer of the University.

### **3 Initiation of disciplinary procedure: Stage 1; informal meeting**

3.1 The Dean of Students will consider any allegation of misconduct and will decide whether a case may appropriately be addressed at stage1. This stage is an opportunity for the resolution of minor disciplinary issues. There will be an interview between the Dean of Students or a representative and the student taking place as soon as possible, enabling the student where appropriate to receive informal guidance as a means of preventing the escalation of an issue into a more serious disciplinary matter. The student will be entitled to bring a friend to the meeting if she wishes to do so (defined for each stage of the university disciplinary process as an enrolled student of the University, an officer of the Student Government or a member of faculty staff).

3.2 The Dean of Students has discretion to determine one of the following outcomes:

- There are no grounds for action (in which case no record of the case will be retained on the student's file):
- The student will receive an informal warning of the consequences of further incidents of misconduct. (a record of the warning will be kept on the student's file for the remainder of her time on their current programme of study but only considered in the event of a further allegation of misconduct. The warning will not be regarded as formal disciplinary action and the record will be removed from the student's file on the conclusion of her current programme of study):
- A formal disciplinary panel should be convened under stage 2.

3.3 The student may contest the outcome of the Stage 1 process. A formal disciplinary panel will be convened under Stage 2. The Stage 2 panel may decide to confirm, to reduce or to set aside the penalty but may not impose a more severe penalty.

3.4 The student will be informed in writing of the outcome of the disciplinary meeting within five working days and told of her right to contest the outcome.

#### **4 Precautionary action**

The Dean of Students may agree with the Registrar precautionary action against an accused student where they judge the safety or others to be at risk or in order to ensure that a full and proper investigation can be carried out. Such precautionary action may include:

- imposing conditions on the accused student (for example, limiting contact with specific individuals or moving the student to another class or group):
- suspending the accused student from study and or from participating in defined university activities:
- prohibiting the accused student from entering particular sites or buildings.

A student may be suspended from the university pending a disciplinary hearing as specified in appendix 3 of this procedure.

Precautionary measures will only be put in place where strictly necessary. Such measures do not indicate that the University has concluded that a student has committed an offence. Failure to comply with a precautionary measure may lead to formal disciplinary action at stage 2 and could trigger immediate suspension pending a hearing (under appendix 1). The student has the right to ask the stage 2 disciplinary panel to review the appropriateness of any precautionary measures.

#### **5 Stage 2 Formal disciplinary panel**

The Registrar's office will arrange the formal disciplinary panel. The student will be informed of the hearing in writing at least five working days in advance of the hearing. The Registrar or nominee will convene the panel as follows:

- Registrar or nominee in the chair
- Two other members of faculty

With the Secretary (who will be nominated by the Registrar to take a record of the meeting and to advise the panel on regulations and procedures).

The Secretary should not have taken part in the preliminary investigation. No member of the panel may have taught the student or had any previous involvement in the case.

Details of the procedure for the disciplinary hearing are in appendix 1. The Registrar's Office will inform the student in writing of the outcome of the hearing within 10 working days or will explain to the student the reasons for any unavoidable delay and state a revised deadline for communicating the decision at the earliest opportunity.

## **6 Stage 3: Appeal against the outcome of a disciplinary hearing**

A student has the right to appeal against the outcome of a stage 2 disciplinary hearing on the following grounds

- A claim that the penalty was excessively severe in relation to the offence:
- A claim that the disciplinary procedure was not implemented properly leading to a significant detriment to the student:
- Significant new evidence that was not available to the Student Disciplinary Hearing.

The student must present an appeal in writing to the Registrar or his nominee within ten working days of notification of the decision of the disciplinary hearing,

The Vice-Chancellor or a nominee will chair the panel. Apart from the Chair, the panel will include two senior members of faculty or university staff, and a Secretary (nominated by the Registrar), who will provide advice on regulations and procedure. No member of the panel may have taught the student or had any previous involvement in the case

## **7 Monitoring student disciplinary cases**

7.1 The Academic Registry's Office will maintain a confidential log of disciplinary cases.



- 7.2 The Student Experience Committee will approve an annual summary report on student disciplinary cases. The report, drafted by the Registrar's Office and the Dean of Students, will summarize the numbers of cases, themes and any institutional issues arising from disciplinary hearings. The report will maintain the confidentiality of individual cases. The report will be presented to Academic Council.

## **APPENDICES; DETAILED PROCEDURES**

### **Appendix 1: Procedure for Stage 2 student disciplinary hearing**

- 1 The student should have at least five working days' written notice of the date of the Hearing
- 2 The notification of the hearing should include a summary of the allegations and a reference to the Student Disciplinary Procedure. The letter will inform the student that she may be accompanied to the hearing by a student, a member of the Student Government, or, where appropriate, by a member of staff of the University. (formal legal representation is not allowed at any stage within the student disciplinary procedure for the student or the University). The letter will assure the student of a presumption of innocence unless or until she is found guilty of the alleged offence.
- 3 The Disciplinary Panel will have discretion to regulate its own operation, aiming for a fair, reasonable, thorough and proportionate investigation.
- 4 The Panel may postpone a decision in order to consider further evidence
- 5 The Panel may decide:
  - to dismiss the case:
  - to warn the student of the potential consequences of any further misconduct (with a record of the warning retained on the student's file for a determined period);
  - to require the student to write a formal apology and an undertaking that the misconduct will not be repeated);
  - to require the student to receive a specified form of support or guidance:
  - To require the student to undertake a specified form of community service:
  - To impose a fine on the student:
  - To require the student to conform to a defined curfew:
  - To issue a formal, written reprimand to the student:
  - To recommend to the Vice-Chancellor the suspension for a defined period up to one academic year or the expulsion of the student (see appendix 3)
  - To order the eviction of the student from university accommodation.

- 6 The Panel may require the student to make good any loss or damage to premises or property or to pay for any expense caused to the University through the misconduct.
- 7 The Secretary will inform the student in writing of the outcomes of the hearing within ten working days of the decision, supplying an explanation of any required delay beyond that deadline. The written notice will be accompanied by a statement of the facts found by the Hearing and the reasons for the decision and for any penalty. The letter will inform the student of the right of appeal.
- 8 The record will remain on the student's file unless the case is dismissed, for a period determined through the guidance of the Registrar. The record must be removed no later than six years following the graduation of a student.
- 9 The Head of Programs will receive confidential notification of the outcome of a disciplinary hearing.

## **Appendix 2: Procedure for appeal against the decision of a stage 2 student**

### **Disciplinary hearing**

- 1 Only the student who is subject to a decision of the Disciplinary Hearing may make an appeal:
- 2 The appeal letter must include a statement of the grounds for appeal.
- 3 An appeal may be made only on:
  - A challenge to the findings of fact:
  - A claim that the penalty was excessively severe in relation to the offence:
  - A claim that the disciplinary procedure was not implemented properly to the significant detriment of the student:
  - That there is significant new evidence which was not available for good reason to the Student Disciplinary hearing.
- 4 The Registrar's Office will receive the appeal and confirm receipt to the student. The Registrar's office will pass the appeal to the Vice-Chancellor for consideration, The Registrar's office will pass an appeal against expulsion to a panel chaired by a Trustee.
- 5 For cases where there are grounds for appeal, the Vice-Chancellor's Office will arrange a panel.
- 6 The appeals panel should meet within twenty working days of the receipt of the appeal. The student will be informed of the reasons in case of a delay beyond this deadline.

## **Membership of appeals panel**

The Panel will consist of:

- The Vice-Chancellor
- Two members of faculty or staff
- Secretary (nominated by the Registrar and acting as source of advice and guidance on regulations and procedure)

No-one involved in the case at any previous stage may sit on the panel and, if possible, no member of the panel should be known directly to the student in question.

## **Conduct of hearing**

The student may submit any written information in support of her appeal no later than two working days in advance of the meeting of the panel. The student is entitled to attend, together with a friend (a registered student of the university, a member of the Student Government or, where appropriate, a member of staff) representative (not a lawyer). The student must notify the Secretary to the Panel of the name of the student or member of staff at least two days in advance of the meeting.

The Hearing will have discretion to regulate its own procedures, aiming for a fair, thorough and timely investigation.

The panel may uphold the decision of the Stage 1 Student Disciplinary Hearing in its entirety or uphold the appeal and substitute such other decisions as it thinks fit within the prescribed list of options (listed in appendix one: item 5). The panel may not impose a penalty more severe than that originally imposed. The panel should attempt to agree a unanimous decision, but it may agree an outcome on the basis of agreement from a majority of the members. The decision of the Student Disciplinary Appeals Panel shall be final.

The Secretary to the Panel will inform the student of the decision in writing, normally within ten working days of the hearing, with a copy to the Registrar, the Chair of the Student Disciplinary Hearing; the Head of Programs. The letter will include a statement of the reasons for the decision and for any change to the penalty to be imposed. The letter will also inform the student that the internal procedures have been completed.

## **Appendix 3 Suspension and Expulsion**

### **Expulsion**

Expulsion involves a total prohibition on attendance at or access to the Institution and on any participation in university activities including opportunities for assessment; but it may be subject to qualification, such as permission to attend for the purpose of examination. The expulsion may include prohibition on the duties of any office or committee membership in the Institution or the Student Government, or employment by the University.

The Vice-Chancellor will decide whether to approve the recommendation of the Student Disciplinary Hearing for the expulsion of a student. The student has the right to be heard by the appeals panel before the Vice-Chancellor approves expulsion. The Vice-Chancellor will report to the next ordinary business meeting of the Board of Trustees any decision to expel a student.

## **Suspension**

Suspension involves selective restriction on attendance at or access to the University. This may include prohibition on duties of any office or committee membership in the Institution or the Student Government, or employment by the Institution.

The Vice-Chancellor will decide whether to approve the recommendation of the Student Disciplinary Hearing for the suspension of a student. The student has the right to be heard by the appeals panel before the Vice-Chancellor decides whether to approve suspension.

## **Precautionary suspension**

The Vice-Chancellor or the Registrar may suspend a student with immediate effect, pending a disciplinary investigation, in a case where s/he considers it necessary to protect a member or members of the University or their property. Written reasons for the decision will be recorded and made available to the student. Any disciplinary hearing should be arranged as soon as possible following the suspension. The suspension carries no presumption of the guilt of the student with regard to the alleged offence.

## **Appendix 4: other points**

### **1 Confidentiality**

The University will take all reasonable steps to maintain the confidentiality of disciplinary proceedings, sharing information only with those whose involvement is required.

### **2. Mental Health disorders and health risks**

The chairs of the disciplinary panels each have discretion to adjourn proceedings for the preparation of medical reports, if they believe that a student may be suffering from a mental health disorder: they should also consider the possibility of any provision for support for the student.

Where a disciplinary or appeals panel decides that a student is in a state of mind or health that poses a threat to the welfare of students or staff or to the good order of the University, it may require the student to pass an occupational health assessment before consideration of the resumption of study. The panel has discretion to terminate proceedings for a student suffering from mental illness or a mental disorder. The panel should also consider the possibility of any provision for support for the student.

### **3 Joint hearings**

In case two or more students are involved in a related case of alleged misconduct, the Hearing/panel may use discretion to deal with the cases through the same hearing.

#### **4 Disciplinary action against members of the Student Government**

Officers of the Student Government are subject to the Student Disciplinary Procedure regarding any allegations of misconduct in relation to their roles within the Union.

#### **5 Retention of records of disciplinary cases**

The records of disciplinary cases will be retained on a student's file for a period determined by the Registrar in proportion to the seriousness of the offence and for no longer than six years following graduation. The records will be removed from the student's file in a case where the allegation is not upheld.

#### **6 Cases involving criminal allegations**

6.1 Where a breach of discipline is being dealt with under criminal proceedings, the disciplinary process will normally be suspended until the criminal process has concluded. The disciplinary process may be initiated following the end of the criminal process where a breach of discipline also appears to have occurred, whether or there has been a conviction.

6.2 When disciplinary action is taken following a related conviction, the conviction may be used as evidence of misconduct. In such cases, the Disciplinary Hearing will take into account the legal penalty in determining the disciplinary penalty.

6.3 The Institution may take action under the disciplinary procedure concurrently with a criminal procedure if the disciplinary case is based on different facts to the criminal case (for example where drug offences lead to persistent absence from scheduled activities).

6.4 The Registrar will report to the police suspected criminal offences against the University where this is considered to be proportionate and where there is judged to be little or no risk to the health, safety and wellbeing of the student or other students.

6.5 Where the victim is not the Institution itself but a student, member of staff or visitor to the University, the victim will be supported to report the matter to the police. The University reserves the right to report suspected criminal offences to the police contrary to the wishes of the alleged victim if there is an overwhelming need to protect others from harm or to prevent a further crime from taking place. In so doing, all possible steps will be taken to preserve the victim's wellbeing.

6.6 If a student who is the victim of an alleged criminal offence decides not to report the matter to the police, the reporting student will be entitled to make a complaint under the student complaints procedure. Such a complaint may result in the initiation of the student disciplinary procedure where the subject of the complaint is accused of misconduct as defined in this procedure.

## All Courses

This list of courses is a sample of what has been offered by AUW over the past several years.

The list is not exhaustive and might not include all the courses available for registration. Before each registration period, the Academic Registry's Office will send a list of all available courses for the following semester. Courses will be offered only if enrollment meets the minimum class size requirement.

### The Core Curriculum

#### Ethical Reasoning

##### ETHR 1000: Introduction to Ethical Reasoning

Moral philosophy addresses fundamental questions of human life and action, such as: How does a person live well as a human being? What is the nature of human virtue, and how is virtue related to reason and emotion? What makes an action "morally good"? Are all moral standards "culturally relative"? Are any actions always morally prohibited, and if so why? This course considers these questions and others, by analyzing fundamental texts in the history of moral philosophy. In the first half of the course, we will consider ancient and medieval ethical writings. We will begin with selections from Confucius and Mencius, and also the Hebrew Bible. Next we will read Plato's dialogue Protagoras, which raises the question of whether and how virtue can be taught. We will then read Aristotle's Nicomachean Ethics, as well as a variety of texts by medieval Aristotelians, including both Islamic and Christian scholars. In the second half of the course, we will examine works by three of the most influential figures in modern philosophy: David Hume, Immanuel Kant, and John Stuart Mill.

##### ETHR 1002: Global Justice

This course provides an overview to the major theories and problems of global justice. It will examine Classical and contemporary views of justice with an international focus and from a variety of Asian and Western perspectives, and will deal with issues relating to human rights and nationalism, globalization, distributive justice and poverty, environmental destruction, and violence against women, children, and minorities. The beginning sections of the course will examine general theories of justice by thinkers such as Plato, Kant, J.S. Mill, the Buddha and Chuang Tzu. The remaining sections of the course will apply these theories to particular problems and issues in the modern world. Students in the course will learn to critically evaluate the ethical dimensions of global justice that underlie most contemporary debates in international politics, and will have the opportunity to develop their own views and assessments of global justice.

##### ETHR 1010: Ethics and Cultural Heritage

In this course, we will explore ethical and moral dilemmas regarding cultural heritage practices and look at different cultural institutions' ethical and moral responsibilities. In this class, students will explore how ethical issues have transformed heritage practices of different local, national, and global cultural institutions. Students will investigate, compare and assess how different professionals working in different cultural institutions, including cultural communities such as indigenous groups and minorities, museums,

governments, the tourist industry, UNESCO, are dealing with heritage conflicts and are approaching dilemmas regarding heritage practices, including acquisition, display, heritage in times of war, cultural ownership, preservation, representation, exhibition, repatriation. In this class, students will gain strong background in the philosophies of Ethic and apply them to the unique dilemmas facing cultural heritage practices.

#### ETHR 1015: International Ethics: Law, Morality and Human Rights.

This course considers the issue of moral values and ethical reasoning in contemporary international affairs. It presents the concepts, theories and methods of ethical analysis and it applies them to a number of global issues (e.g. human rights, international law, foreign intervention and global justice) and case-studies (e.g. Somalia, Rwanda, Yugoslavia and Iraq). It asks if there is—and whether there should be—such a thing as international political morality.

ETHR 2200: The Role of Law in International Politics While politics and law are deeply intertwined in contemporary global affairs, scholars and practitioners often argue that the law is not a significant restraint on international relations. This course will look at the interplay between international law and international relations by exploring the historical evolution, philosophical nature and practical function of international law in world politics and by situating it in its historical, philosophical and political contexts. It will consider the relationship between politics, philosophy and law on issues as diverse as the use of force, war crimes, human rights and the environment, among others.

#### ETHR 1016: The Morality of Massacres and Genocides

Ethnic cleansing and genocides are seen as abhorrent acts committed by a deranged minority, the result of a dark side of human behavior that is unethical, exceptional and largely incomprehensible. This course challenges these views, investigates the sources of mass killings in the modern world and asks the following question: 'why genocide'? Using the most tragic examples of ethnic cleansing (such as colonial genocides, Armenia, the Nazi Holocaust, Cambodia, Yugoslavia and Rwanda) as well as cases of lesser violence (such as early modern Europe, contemporary India and Indonesia), the course will show that extreme political violence and mass extermination are not simply the work of 'evil elites' or 'primitives', but the result of complex interactions between leaders, militants and 'ordinary' people. This aspect of 'ordinary' people becoming perpetrators of evil acts is important, for not only were most episodes of ethnic massacres and genocides seen as perfectly moral at the time they were committed; such a perception was an essential condition for these massacres to take place. Since understanding this complex process will hopefully help us devise policies to avoid ethnic cleansing in the future, we will explore the causes, triggers, domestic and international contexts, implementation, nature and the uses of genocide as a political phenomenon.

#### ETHR 1012: Ethics in research

Research ethics define the standards of conduct that promote the nature of research (knowledge, truth and avoidance of error), productive collaboration among researchers, their accountability to the public, and public support for research itself. We will consider the four ethical theories underlying research ethics- ethical egoism, contractualism, moral rights and utilitarianism-and apply these theories in the process of ethical decision making while considering case studies of issues that all researchers may face in some stage of their career: mentor/mentee interactions, plagiarism, reporting misconduct, productive collaboration and authorship, data collection and analysis, informed consent, intellectual property, conflicts of interest with private industry, animal rights, environmental ethics, and the social responsibility of researchers. At the conclusion of the course, students will demonstrate their understanding of research ethics by assessing the degree to which published papers or public projects have abided by research ethics

norms and relevant international and national codes and policies. They may also argue that specific papers should not be cited by future researchers based on their lack of compliance with ethical standards of research.

## **Literature, Civilization Studies & the Arts**

### **LCSA 1000: World Literature I**

The idea of world literature has been around for centuries. In 1827, for example, Johann Wolfgang von Goethe, the most canonical figure in German literature, claimed that, "National literature is now a rather unmeaning term; the epoch of world literature is at hand, and everyone must strive to hasten its approach. But, while we thus value what is foreign, we must not bind ourselves to some particular thing, and regard it as a model." Keeping Goethe's ideas in mind, we will examine how what we think of as world literature has shifted from a European (read: privileged, white, male) canon to an emerging global perspective of diversity in 'race,' ethnicity, class, gender, a/sexuality, and dis/ability. In this course, we will engage with a wide variety of texts by authors from Africa, Europe, Latin America, and New Zealand. We will use short stories, novels, plays, and films to explore and contextualize representations of places, people, and traditions that can be different from - yet sometimes also similar to - our own backgrounds. While we will learn much about the regions and cultures that the texts address, we should also keep in mind that one text cannot be representative of a whole region, country, or people. Key themes will include the canon and national identity, gender, a/sexuality, memory, ecology, authenticity, postcolonial struggles, migration, and social justice.

### **LCSA 1001: World Literature II**

In this course, we will engage with a wide variety of texts by authors from Asia, the Middle East, and the Caribbean. We will use short stories, novels, and films to explore and contextualize representations of places, people, and traditions that can be different from - yet sometimes also similar to - our own backgrounds. While we will learn much about the regions and cultures that the texts address, we should also keep in mind that one text cannot be representative of a whole region, country, or people. Key themes will include the canon and national identity, gender, a/sexuality, memory, ecology, authenticity, postcolonial struggles, migration, and social justice. Students should be prepared to participate actively in discussions, give a short presentation in class, and write several papers.

### **LCSA 1003: Women Writers (Asian)**

The course will explore the ways and modes of depiction and representation of women in the Asian literary tradition. Through an interdisciplinary approach the class will explore how the women assert the importance of self representation and identity formation or disintegration based on single behaviors or institutional practices and how they are produced, maintained or transformed. The pedagogy will focus on the achievements and perspectives of women writers through critical analysis of their literary works and literary strategies. The course will comprise of lectures and discussions, group work, practical exercises, and guest lectures. In order to encourage participation in the classroom we will employ a number of techniques which includes the use of texts, power-point presentations and discussion-driven exercises. Books and/or reading packs will be made available to the class at the beginning of the semester.

### **LCSA 1004: Women Writers II (Western)**

The course will explore the ways and modes of depiction and representation of women in the Western literary tradition. Through an interdisciplinary approach the class will explore how the women assert the importance of self representation and identity formation or disintegration based on single behaviors or



institutional practices and how they are produced, maintained or transformed. The pedagogy will emphasize on critical thinking and analytical writing. The emphasis will be on women writers' strategies of articulating female experience and the role of literature as a reflection of and a catalyst for social change. The pedagogy will emphasize on critical thinking and analytical writing.

#### LCSA 1008: Introduction to Asian Religions

This course will survey the major religious traditions of South Asia, SE Asia, China and Japan, and will focus on the religions of Buddhism, Islam, Hinduism, Confucianism, and Taoism. We will examine the rituals, practices, and beliefs of these various Asian traditions in an inter-disciplinary manner, exploring their historical, philosophical, and cultural foundations, as well as their contemporary expressions in popular media, visual art, literature, and film. We will read the primary religious texts in these traditions and examine how they have been interpreted and expressed throughout various historical periods-- both ancient and modern. We will also explore various interactions and conflicts between these traditions, and raise questions about the relationship between religion, violence, war, and peace.

#### LCSA 1013: Acting, Voice and Movement (FA)

This course will provide theory and practice in beginning acting technique, scene study, and the development of voice and movement skills. Physical and vocal training will emphasize an awareness of the performer's body in relations to space, and as applied in dramatic staging. Class exercises and scene work will explore gestural vocabulary and spoken language skills in order to enhance a performer's ability to speak clearly and expressively. All students will perform in a final production project based on dramatic literature of Asia. This course is not open to students who are taking Directing and Producing for Theatre (Spring 2014)

#### LCSA 1016: Digital Filmmaking & Media Literacy (FA Practicum)

The Digital Filmmaking & Media Literacy: An Introduction course provides students with a hands-on opportunity to produce a wide range of video projects including stop-motion animation, silent narrative films, music videos, and short documentary films. Within these projects, students are given the opportunity to perform each of the production functions and will learn such core concepts as framing/composition, camera movement, anatomy of a scene, pre-production processes (storyboarding, scripting, etc.), interview skills, and post production processes (editing, sound design). Beyond these real world applications, students read (or watch) and analyze articles, case studies, scenes/clips/featurettes, and entire films.

#### LCSA1044: Pantomime Appreciation

Pantomime is the most ancient form of art that began when human beings felt the necessity to communicate with each other but didn't have any verbal language. They had only their body – their gestures and facial expressions – with which they created a universal language. Pantomime is the artistic form of that language. This course focuses on five (05) major topics:

1. Body Analysis and Use of Body
2. Yoga I

3. Body Language
4. Facial Expression
5. Story Development (Solo)

In this course, students will learn the basics of pantomime art and its effect and usefulness on their personal and professional lives. Through various exercises, we will be able to make our bodies flexible and active, and we will be able to re-create specific body language and expression as any situation demands.

#### LCSA1045: Basics of Verbal Acting

It is not necessary for everyone who learns acting to perform professionally on a stage, but it is necessary for everyone to be a performer in her professional life. This is what an acting course can contribute to a student's career, and this course is designed based on this philosophy. Through this course, students will be introduced to verbal acting and its techniques, i.e. voice modulation, elements of speech, and movement of body, and where and how to use them. At the end of the course, the students will have a dual performance in which they will be able to apply the skills they learned from the course. This course will focus on the following topics:

1. Definition of acting
2. Voice modulation
3. Elements of speech
4. Speech development
5. Yoga II
6. Body movement
7. Dual presentation

#### LCSA1046: Fiction Film Making

As the title implies, this is a basic course on fiction film making. Making a film encompasses a vast arena. This course will introduce students to the beginning path. Students will learn both the technical and aesthetic aspects of film making such as script writing, shot division, basics of camera, camera language, shooting, and editing through practical classes. They will also learn how to shoot a film with minimum resources to get the maximum possible output. They will do pre-production, production and post-production activities so that they will be able to design and create a visual production by themselves.

#### LCSA 1102: Women in World History

This course provides both historical knowledge on women's experiences in history and the skills required to conduct

historical research. We will consider issues of exclusion from history, social histories, grand narratives, and assessing women's status in history through women's historiography. We will question constructions of the category of "women" that define history as universally shared experiences and discuss if specific variances such as time, class, place and race must be considered when studying women in history. What do we know about women's experiences as recorded in history? How do we read narratives found in primary and secondary sources, through oral tradition and in visual evidence?

#### LCSA 1115: Beginning Mandarin

Beginning Mandarin I is the first in a series of six semester-long courses intended to help students communicate effectively using Mandarin Chinese. The course will introduce the fundamentals of the language to students without prior knowledge of Chinese with a strong focus on speaking and listening skills needed for common daily life interactions. In particular, students will learn how to have basic conversations with people they meet, talk about food, make purchases, and get around in China. The

course will develop student mastery of pinyin pronunciation, basic grammar, and practical vocabulary. While learning activities will rely on pinyin, students will also be expected to learn to recognize common Chinese characters and be able to write at least 100 Chinese characters by the end of the semester. In addition, periodic cultural presentations and discussions will be held to increase students' familiarity with China and its people.

#### LCSA 1116: A History of International Relations in Thirty Objects

This course exposes students to a visual history of international relations. By introducing and analyzing thirty everyday objects ranging in time from antiquity to the contemporary world, the course presents international history as a kaleidoscope of cultures, languages and philosophies—one that is constantly shifting, profoundly interconnected, constantly surprising and shaping our modern world in ways that most of us would have never imagined. An anonymous and ordinary-looking stone pillar, for example, will tell us the story of a great Indian emperor preaching tolerance to his people; a series of luxurious Spanish coins will reveal the beginning of a global currency and how kings and political leaders handled it; an ancient, damaged and largely incorrect map of the world will bring Columbus and the discovery of America to life; and an early Victorian tea-set will speak to us about the impact of empire upon the peoples who lived under it. The aim of the course is to make the history of international relations understandable through everyday objects, while also highlight the ingeniousness, complexity and resilience of the human spirit.

#### LCSA 1201: Art History, A Global Perspective

This course is designed as a thematically organized art historical survey. We will look at art history from a global perspective, exploring questions and issues raised by artists, art historians and critics in different parts of the world. Exploring Art thematically gives us the opportunity to look at a wide range of artistic expressions, from the prehistory to the contemporary era. The goal of this course is to give you the tools necessary to explore, investigate and appreciate art, whether you are looking at the Taj Mahal in India, a Mayan pyramid in Mexico, the Mona Lisa at the Louvre, Rock Art in Australia, a jade sculpture from China or a family heirloom in your own house. Although the course will more or less follow a chronological outline, the different regional artistic cultures will not be studied in details. Rather, we will focus on different themes and artistic concepts, such as art and power, art and spirituality, art for art sake and art of the everyday life, to name a few.

#### LCSA 1202: Introduction to Asian Art

This course is designed as an introduction to Asian art and architecture. We will investigate historical and modern Asian

art from different perspectives, including traditional, religious, political and social perspectives. Together, we will explore the transformative power of Asian art, including the stylistic transformation of Islamic art in South Asia, the transformation of Buddhist art along the Silk Road, and the rise of Asian modern art in the post-colonial era. We will also look at different media, such as textile, block prints, paintings, wooden and stone architecture, ceramic, and ephemeral art such as henna painting and flower arrangements.

#### LCSA 1204: Choir

Choir at AUW will entail instruction in vocal technique, theory, music reading, use of harmony and diction to form a fully blended sound. The course will include music from varied ethnic backgrounds and various languages. Throughout the semester, we will learn pieces of music that will improve upon music reading skills as well as vocal technique. Students will be offered numerous opportunities for both solo and group performances culminating in an end-of-semester concert. No prior music knowledge is required to take this course.

### **LCSA 2002: Musical Composition**

The course in musical composition will provide a basic introductory knowledge of musical theory and the tools to harmonize basic melody, spell out common chord progressions, and encourage creative thought and musical expression. Evaluation in the course is based on understanding of musical theory and on compositional projects assigned throughout the semester. Students will be expected to learn the basics of both the piano and the music writing software Finale 2012 for their composition projects. This course will be fast-paced, and students will have a considerable amount of work to do outside the classroom, but the work will be very rewarding.

## **Math and Science**

### **BIOL 1001: Discovery in Forensic Science (Core Science)**

Forensic Science involves scientific method of gathering and examining data/information about the past. Forensic Science is important in law enforcement in relation to criminal and civil law. It also draws upon a variety of scientific principles, including biology, physics, chemistry, astronomy, and geology to investigate ancient times. This course will introduce both science and non-science students to the scientific aspects of forensic investigation along with the ethical issues facing the forensic scientist. The course will establish a foundation for understanding many of the concepts and techniques on which forensic science is built. Broad range of topics in forensic procedures such as physical and chemical methods for visualizing fingerprints, ballistics including bullet identification and gunshot residues analysis, blood detection and characterization, DNA profiling, fiber and hair analysis and testing of controlled substances will be discussed. Students will learn about the analytical and instrumental methods used in investigating crimes, emphasizing on the measurement accuracy and traceability required in criminalities. Various case studies from literature will be evaluated and students will be involved in investigation of a simulated crime followed by presentation of their investigation to the jury. Students will also be required to write reports on various simulated cases.

Some of the learning outcomes from this course are: 1. Determine appropriate conclusions based on scientific evidence. 2. Write scientific reports and follow scientific procedures to obtain standardized replicable results. 3. Apply critical thinking skills in solving justice problems of a specific nature by discussing relevant court cases and impact of science within. 4. Be able to discriminate between science and science fiction. 5. Understand the relationship

### **BIOL 1030: Understanding the Human Body**

Understanding the Human Body is a course for non-science majors that will fulfill one of the Science/Math requirements in the core curriculum. We will examine the factors that shape an individual's understanding of the human body, including family, society, culture and science, and explore the misconceptions that many of us have about the function and health of our bodies. The course will give students the opportunity to explore topics of their own interest, such as the cause of disease, cures for cancer, stem cell research, female health, human reproduction, and evolution. We will discuss articles about the human body presented in the popular media, and use research to determine if the claims have been validated by science, before debating the influence of popular media on socio-cultural beliefs and our own understanding of the human body.

### **BIOL 1100: Biology I (with Lab)**

General Biology I can fulfill one of the Science/ Math course requirements in the core curriculum for any student, and is also a required course for students intending to major in Biological Science, Environmental

Science, and Public Health. Biology I will provide students with an understanding of the diversity of animal life at the level of biomolecules, cells

and whole organisms, together with an appreciation of a range of fundamental themes in contemporary biology (including cell theory, biological systems, biodiversity, heredity and evolution). Topics will include the basic structure and function of cells, cell energetics and respiration, photosynthesis, trans-membrane transport, signal transduction, intra and inter cellular transport, heredity, the structure and function of DNA, the control of gene expression, cell division, the evolution of multicellularity, tissue structure and function, organ systems, respiration, reproduction, digestion, excretion, and immune system. Students will also conduct a range of laboratory procedures relating to the organization and function of living organisms at the molecular, cellular and whole organism level. Specific experiments investigating scientific method, instrumentation, membrane transport, enzymes kinetics, respiration, mitosis & meiosis, translation, digestion, cell specialization and biotechnology will be carried out.

#### BIOL 1101: Biology II (with Lab)

General Biology II can fulfill one of the Science/Math course requirements in the core curriculum for any student, and is also a required course for students intending to major in Biological Science, Environmental Science, and Public Health. Within the overarching theme of evolution, we will build upon your understanding of topics in General Biology I and examine the animals and plants in different ecosystems, including their adaptations and interactions, and role in energy cycling and nutrient cycling. Practical classes will include field trips and collections, simulation and modeling exercises, microscopy, and experiments. Students will also build professional skills in experimental design and scientific writing. Prerequisite(s): Satisfactory completion of Biology I or at the discretion of the instructor.

#### BIOL 4980: Senior Seminar in Biology:

This course is for the final year Biological Sciences student interested in conducting research in a particular area of Biology. Students start with writing a well thought research proposal with a clear goal and discrete timeline. Students will learn as a group the basic procedure regarding carrying out an independent research project. Students will also interact regularly with the faculty on a one to one basis updating the progress of their project. Finally students will present the outcome of their research orally as a presentation and submit the research report as a thesis.

#### CHEM 1100: General Chemistry I (with Lab)

Chemistry I is the first semester of a two-semester series that will cover general, inorganic chemistry topics and prepare you for further studies in scientific majors. I will also emphasize green chemistry theory and highlight chemistry in everyday life and society. This course will consist of lectures, laboratory exercises and a weekly discussion/problem solving session. We will cover topics such as the mole, stoichiometry, the periodic table, and various types of chemical reactions, phases of matter, intermolecular forces and bonding theory.

#### CHEM 1101: General Chemistry II (with Lab)

Chemistry II is the continuation of Chemistry I that will cover physical chemistry topics and will help you to prepare yourself for the scientific majors. Similar to Chemistry I, this course will also have lectures, laboratory and a weekly discussion/problem session. This course will cover topics such as thermochemistry, chemical kinetics, chemical equilibrium, acids-bases, solubility, entropy and free energy, electrochemistry and nuclear chemistry. This is a course that requires hard working, continual studying, homework and assignments in order to keep up with the material for successful completion.

Prerequisite(s): Satisfactory completion of Chemistry I PHYS 1100: Physics I

Physics I will cover the following concepts of dynamics: Newton's law of motion; motion and force; work, energy, and power; linear motion of particle; two dimensional motion; waves and oscillation; momentum of particles; conservation of energy; and application centered with these in the physical world; as well as these concepts of thermodynamics: heat and work; applications of the 1st and 2nd law of thermodynamics; the zeroth law of thermodynamics; kinetics theory of gases; specific heat of gases; equipartition of energy; mean free path; Maxwell's distribution; reversible and irreversible process, Carnot's theorem and cycle; and thermodynamic function.

Prerequisite(s): Satisfactory completion of Calculus I.

#### PHYS 1101: Physics II

Physics II is a continuation of Physics I and will cover electricity, magnetism and electromagnetic fields and forces. Electromagnetic forces quite literally dominate our everyday experience. The very tiny charge particle does not fall through the floor to the center of the earth rather it is floating on electrostatic force fields, because electromagnetic forces are so enormously strong almost  $10^{40}$  times stronger than gravity. In our everyday experience, matter is electrically neutral and our direct experience with electromagnetic phenomena is disguised by many subtleties associated with that neutrality. This is very unlike our direct experience with gravitational forces, which is straightforward and unambiguous.

Prerequisite(s): Satisfactory completion of Physics I PHYS 1102: Descriptive Physics for Non-Scientists

An introductory course in physics for students of non-science majors. Emphasis will be given on measurement, mechanics and selected topics from heat, sound, light, electricity and magnetism as they relate to our daily lives. In this course you will learn how to apply scientific data, concepts and models to problem-solving and find solutions to applied problems using numerical, graphical and elementary algebraic techniques.

#### MATH 1000: Calculus I

Calculus I is a foundational course; it plays an important role in the understanding of engineering, economics, and computer science, among other disciplines. This introductory calculus course covers differentiation and integration of functions of one variable, with applications. Topics include: Functions; Limits and Continuity; Differentiation; Application of Derivatives; Integration; Integrals using advanced techniques of integration, such as inverse substitution, partial fractions and integration by parts. After completing this course, students should have developed a clear understanding of the fundamental concepts of single variable calculus and a range of skills allowing them to work effectively with the concepts.

Prerequisite(s): Satisfactory completion of Pre-Calculus.

#### MATH 1001: Calculus II

Calculus II is a second semester calculus course for students who have previously been introduced to the basic ideas of differential and integral calculus. It is a continuation of Calculus I. Over the semester we will study First-Order and Second - Order Differential Equations, Infinite Sequence and Series, Vectors and the Geometry of Space, Partial Derivatives and Multiple Integrals. In this course you will learn how to use calculus to understand and model real life situations such as those in business, environmental changes, population growth to name a few. As expected, real life situations are in general very complicated and are difficult to model but with the mathematics in this course we can understand some of the more basic models. The material we take up in this course has applications in physics, chemistry, biology, environmental science, astronomy, economics, statistics, and just about everything else. We want you to

leave the course not only with computational ability, but with the ability to use these notions in their natural scientific contexts, and with an appreciation of their mathematical beauty and power.

Prerequisite(s): Satisfactory completion of Calculus I

#### **MATH 1002: Probability and Statistics**

This course starts with descriptive statistics and aims to provide an understanding of the basic concepts improbability, conditional probability, independent events and Baye's theorem. It will also focus on the random variable, mathematical expectation, and different types of distributions, sampling theory, regression analysis and estimation theory. Another objective of the course is to design a statistical hypothesis about the real world problem and conduct appropriate test for drawing valid inference about the population characteristics. It is inevitable to have the knowledge of hypothesis testing for any research work. The course will provide an opportunity to learn many data analysis software like Statistical Package for Social Science (SPSS), Excel, especially R to perform simple and sophisticated analyses for large samples. This course is very effective for Economics, Biological science, Public health studies, Environmental studies, Social science, Business studies and many more.

#### **Additional Courses**

##### **PHST 1000: Introduction to Public Health**

This course promises to take you on a journey through the science and the art of public health issues, concepts and practice by examining the philosophy, purpose, functions, organization, tools, activities and results of public health. Case studies will enable you to apply your knowledge to real-world local and international public health problems in order to understand how public health strategies contribute to population health. After the course you will possess an overview of this field to help you think about and explore how you can contribute to public health's mission for your community, nation and the world, either through a public health career or as a knowledgeable, engaged member of society.

##### **ENVS 1000: Introduction to Environmental Science**

We will discuss the scope and importance of environmental science and its relationship with other branches of science. We will focus on several different aspects of the environment including: the principal components of the earth system – atmosphere, lithosphere, hydrosphere, biosphere and pedosphere; the structure and function of ecosystems; aspects of biodiversity and its conservation; renewable and non-renewable sources and their sustainable management; and topical issues e.g. carbon sequestration and global warming, pollution, natural disasters. This course does not have a lab but will include orientation tours to different industries and polluted areas and the preparation of a report on one of the visited areas.

##### **ENVS 1001: Water Resources and Development**

Water and water resources are important factors in the development of society. The course covers some of the essential facets in which water has combined with societal development. The course is introductory in nature and attempts to provide a basic overview of some of the disciplines such as water use and water quality that have specific applications in water resources engineering and management. The course focuses on three major parts of water resources and development. Part I deals with introduction to water resources including surface and ground water sources, basic water science, water resources development planning concepts and water resources development policy. Part II deals with water use and its associated analysis, including domestic/urban use, water supply and demand, irrigation and hydropower. Part III

deals with water quality and environment including water pollution, public health and, environment and social impact assessment.

#### CSCI 1101: Fundamentals of Computers (with Lab)

This course aims to provide a brief idea about the basics of computers Systems and Computing, the role of Computers in the society. It will introduce the components of computer (hardware and software), operating system, networking and database basics. How a computer program solves the problem and the total procedure to design and implement a program will be experienced in the course. Lab sessions will focus more on network design, introducing different application programs and web programming.

CSCI 1102: Problem Solving and Decision Making Efficient decision making is of utmost importance in any aspect of an individual's life. People who are able to consistently identify the problem and gauge its importance tend to be in a better position of solving it by choosing the best option among multiple alternatives. The decisions of these people are generally imaginative, logical, solid, and defensible. In this course, students will be equipped with knowledge and tools necessary to become an imaginative, logical problem solver/decision maker. They will explore a structured way to approach and dissect problems, and learn to clarify problems in terms of objectives and issues, with a view toward possible outcomes. Finally, the students will apply their acquired knowledge to handle a relevant IT-related project as a hands-on exercise.

### **Regional Challenges**

Please note that the requirements for the RCHA have change since the 2017-2018 academic year. RCHA courses are offered as upper level courses as part of the Major/Minor or as Free Electives.

#### RCHA/ ENVS 2000: Environmental Challenges in Asia

This course is designed to cover the environmental challenges in Asian countries. These include: heavy metal poisoning, environmental pollution; deforestation; soil erosion waste management: concepts and theories on occurrence will be discussed. The course will enable students to elucidate and understand specific challenges, their effects, and predictions of fate.

#### RCHA 2002: Public Health Challenges in Asia

Our health is a major contributor to our individual and national wealth, and public health can promote and protect health and prevent disease. However, public health is often systematically underfunded by many governments' health systems in and outside of Asia. In this course you will first review the definition of public health. Then we will examine several key public health issues in South and Southeast Asia to understand how well the region's public health systems and interventions are meeting their health challenges. Finally, through examining mostly Asian case studies and conducting a class project, you will be challenged to relate these and otherwise explore your own country's public health system and determine how to further develop and strengthen it to improve the health of the population. At the end of the course, you will be able to contribute to public health's mission for your community, nation and world, either through a career in public health or as a knowledgeable, engaged member of society.

#### RCHA 2008: Gender Equality and Women's Empowerment in Asia

Countries in Asia have made tremendous economic growth in past few decades compare to the other parts of the world. We have seen sharp fall of extreme poverty, resilient communities in disaster situations and narrowing gender gaps in education, health, employment and political participation in Asian regions.



But, the progress and achievements made by the Asian countries are not spread widely and evenly across the entire region. Disparities remain in many areas. Many women are still denied access to basic services and essential assets such as land, and excluded from decision-making. In some countries and among some groups, women still suffer from entrenched gender discrimination and exclusion that diminishes their life expectancy, education prospects, access to clean water, sanitation, and employment, and exposes them to gender-based violence. On the whole, ensuring gender equality and women's empowerment remains a major challenge in the Asian countries. This particular course is designed to introduce students to issues of gender equality and women's empowerment in Asian countries in a comparative context. Starting with theoretical debates in the field of gender studies and development, the course will analyze the challenges in ensuring gender equality and women's empowerment along with examining specific case studies from the region. With the combination of class lectures, audio-visual documentaries, extensive class room discussions, group exercises and bringing real life examples from the students and instructor, the course will enable the students to learn the fact that 'gender equality and women's empowerment' are essential for meeting Asia's aspirations of inclusive and sustainable development.

#### RCHA 2009: Gender Based Violence in South Asia

Gender based violence (GBV) refers to the violence that is directed towards individuals or groups on the basis of their gender. GBV is used to maintain gender hierarchies and inequalities through power and control, manifesting in identifiably physical, emotional, psychological and economic violence. While GBV is often used interchangeably with 'violence against women' and this kind of violence is commonly assumed to be perpetuated by men, GBV can be directed towards men and boys as well and women may be perpetrators. GBV includes (but is not limited to) intimate partner violence, rape, sexual harassment, female feticide, and trafficking. In South Asia, due to an amalgamation of different religious, historic and community cultures and traditions, GBV occurs within a unique context. This context is further complicated by the rapid economic development and its wake, the technological progression that is occurring in these developing countries. In this course we will explore and understand how Gender Based Violence exists and persists in this complicated context. We will also explore how GBV is simultaneously aided and challenged by technological advances and neoliberal globalization. This course will use an interdisciplinary lens and will draw on feminist theories, cultural studies, anthropology, sociology and development studies.

#### RCHA 2010: Gender, Justice & Conflict in South Asia

The course will be interdisciplinary in nature and a multitude of teaching and learning techniques will be employed including discussion-based activities, in-class debates, oral presentations, the making of audio and visual multimedia to explore the topics introduced in class, field research and interviewing, blogging, as well as lectures. We will begin with an overview of feminist theories of justice, ethics and war, and will discuss to what extent these theories, largely although not exclusively coming out of the West, can be applied to contexts such as South Asia. We will focus in particular on the concept of intersectionality and use India as a case study of the intersection among gender, national identity, religion, and caste. The next section of the course will discuss research methodologies that feminists have developed in international relations, sociology, and other disciplines that have been employed to reveal the experiences of marginalized voices. Using these alternative methodologies allows us to question the usual units of analysis which inform our understanding of conflict and justice, which all too often tend to focus exclusively on formal institutions and visible leaders, to the exclusion of those affected very differently by these processes such as women and children. This section of the course will use the experience of the 1971 Liberation War in Bangladesh as a site from which to employ feminist methods to study "silences," particularly the various forms of secrecy surrounding incidents of sexual violence during the war. Also drawing on this example, the next section of the course will discuss gendered forms of violence to consider

how men and women are both victimized in wartime, but often in very different ways. Case studies in this section will also include the People's War in Nepal and the Khmer Rouge in Cambodia. This section will also explore theoretical concepts from masculinity studies, which endeavors to show how men are simultaneously the benefactors as well as the victims of patriarchy, especially in a militarized context. We will then explore gender issues as they relate to post-conflict scenarios and peace building, using the experience of women in the Chittagong Hill Tracts in the wake of the CHT Accord as our case study. Another case study we will explore is the experience of Afghanistan, where we will focus on the idea of foreign intervention and reconstruction, again with the aim of discovering how gender informs these practices. Finally, we will broadly consider gender as it relates to economic development issues. Again, Bangladesh will serve as a case study to critically assess the mechanics of micro-finance schemes, their impact on women, and their successes and shortcomings.

## **Social Analysis**

### **SOCA 1000: Social & Political Thought I**

In Social and Political Thought I: Introduction to Political Philosophy, we will cut across time and space to see how philosophers, political advisers, and politicians have addressed crucial questions about society and politics: Do human beings and societies need to be ruled? Do they need states? What does the ideal polity look like? Who should rule and to what end? Are there identifiable recipes for effective rule? We will see how Ibn-Khaldun, Hobbes, and Rousseau justified the necessity of the state, examine apparent similarities between Plato and Khomeini, and reflect on Kautilya's assertion that it might, on occasion, be desirable for a king to poison his son. We will also draw on the writings of Aristotle, Farabi, Locke, Machiavelli, and Rashid el-Ghannouchi, among others, to gain an appreciation for the broad range of visions political philosophy offers about the ideal means to organize state and society. This course also aims at providing students with the skills necessary to assess and question existing structures, coherently present and defend arguments, and use socio-political theory to analyze personal experiences and contemporary events.

### **SOCA 1001: Social and Political Thought II**

This course will examine how international and domestic political interests have shaped and been shaped by women's rights movements in contexts such as Morocco, Tunisia, Egypt, Turkey, Iran, Pakistan, India, Bangladesh, and Malaysia. In particular, it will consider the impact of state-building, electoral politics, the rise of socially conservative actors, and the War on Terror on the conceptualization and instrumentalization of women's rights. We will explore how women's rights activists have contended with unexpected adversaries and unlikely allies: we will encounter secularists who betrayed feminists, Islamists who championed feminism, and feminists who boycotted US government assistance.

### **SOCA 1004: Mind & Behavior**

This course will provide you with a broad introduction to the field of psychology, one of the social sciences. Among the topics we will cover are: gathering data on the causes and correlates of behavior, key figures in psychology and their theories, examples of research findings from the major subareas of the field, and using psychological knowledge to improve the quality of our lives. This survey of psychology will acquaint you with the major concepts and terminology of the discipline and give you a better understanding of self and others. We'll use a combination of lectures, video clips, group activity and discussion. I hope it will make you want to learn more about psychology and have you asking "What's the evidence?" each time you encounter statements about behavior. Last of all, it should be fun and interesting!

### SOCA 1008: Sociological Perspectives

How do we become who we are? How do groups (races, ethnicities, classes, genders) form? How do societies change? How do we change? What are the relationships between people in societies and the social, cultural, economic and political processes that operate in them? This course will introduce you to the perspectives in sociology that help us answer these questions. Sociological perspectives aim to understand, analyze and communicate about the societies in which we are located and the relationships, roles and functions of the institutions embedded in them. The key conceptual foci are individual, groups and communities, as well as institutions and the relations among them. By the end of the course, you will have concepts, tools and questions that will help you understand yourself and human societies better and what it means to be a part of complex and diverse world.

### SOCA 1010: The IR of Football

This course introduces students to the multiple ways in which football is a lens to understand social, cultural, economic, and political forces. There are many ways in which football can act as an agent for change, and multiple arenas of political life can be explained using interactions via football. This course will analyze the interactions between multiple actors, including states, organizations, identity groups, and individuals using specific football matches or events to illustrate important concepts. We will cover such topics as international governmental and non-governmental organizations, human rights and migrant worker abuse, protests and social movements, identity formation, and many more. After this course, students will better understand the social, political, and economic forces that influence the global system and develop an understanding of how these forces interact and are influenced by different cultures.

### SOCA 1101: Introduction to Gender Studies (GS)

This course is an introduction to gender studies course that will examine various texts and ideas from literature, philosophy, religious studies, queer theory, history, and film. The course is both interdisciplinary and cross-cultural, and will study the influence of gender in Asia and across the globe, and from various disciplinary perspectives. We will examine issues regarding gender and sexuality, including the social construction of gender and identity, the intersections between gender, race, sex, class, and nationality, the connections between masculinity and culture, and various lesbian, gay, transgender and queer communities from around the world.

### SOCA 1200: Islam, Politics, and Women's Rights

This course will examine how international and domestic political interests have shaped and been shaped by women's rights movements in contexts such as Morocco, Tunisia, Egypt, Jordan, Turkey, Iran, Pakistan, Bangladesh, and Malaysia. In particular, it will consider the impact of state-building, electoral politics, the rise of socially conservative actors, and the War on Terror on the conceptualization and instrumentalization of women's rights. We will also explore how women's rights activists have contended with unexpected adversaries and unlikely allies: we will encounter secularists who betrayed feminists, Islamists who championed feminism, and feminists who boycotted US government assistance. Students who have taken SOCA 1001: Politics of Women's Rights may not take this course.

### SOCA 2600: Introduction to Development Studies

Development Studies is an interdisciplinary study where academic depth is achieved through insight into different and often overlapping fields. Introduction to Development Studies will provide students with an overview of the key questions, actors, debates, issues and challenges in development and in the Global

South. Moreover, it will also introduce students with the measures utilized in development literature and practice (indices and indicators), equipping them with basic informational literacy and quantitative reasoning skills necessary in the study and practice of development. This course will enable students to explore and gain further understanding of development through the investigation of key debates over development, theories of development, and the ways development is experienced 'on the ground' through contemporary issues and case studies. This course will also introduce students to the analytical skills necessary to critically assess development and serve as a basis for progression through the development studies minor program.

#### SOCA 2100 Globalization and Society

Globalization describes the processes by which economies, societies and cultures have become integrated through communication, transportation and technology. This particular course critically examines the subject of globalization from a sociological perspective. Relying on a wealth of literature in sociology and political economy, the course introduces the students to the role of power relations, class dynamics, institutional changes, laws and regulations, and market and non-market forces in shaping global capitalism and its impact on the societies of developing countries. Globalization is not only a tendency any more but also a fact through which the people around the world are gathering into single society and function together for mutual benefits. This course will provide students with international experience to deepen their understanding of the problems and opportunities associated with our interconnected world. This interdisciplinary course will critically examine key issues within communities and societies, explore the meaning, power, and obligations of citizenship, and begin to develop the skills necessary to create positive, effective, and sustainable change. Particular emphasis will be placed on social inequality, human rights, and economic justice.

#### SOCA 2990: Qualitative Research Methods

This course will help students develop their knowledge and skills in qualitative research methods and the ethics and politics of research. The course explores a range of approaches and practical techniques that will assist students in designing, conducting and writing-up their own qualitative research. We will examine the historical, philosophical, theoretical and epistemological foundations of qualitative inquiry. Ethical and political considerations inform every aspect of research involving humans and are, thus, a central concern in the course. Cultural and social awareness and self-reflexivity are pivotal to the design of our research projects and our ethical conduct as researchers. We address diversity and the ways gender, class, race, ethnicity, sexuality, religion and age impact on research processes and how research affects people and communities. Students will learn from case studies and analysis of qualitative methodologies, as well as by developing their own research project, which they will conduct during the semester. Key topics include qualitative data collection, interpretation and analysis, bias and validity, ethical issues and the politics of research, including relationships with participants, and self-reflexivity.

### **Writing and Rhetoric Seminars**

#### WSEM 1004: Mass-hysteria, Conspiracy Theories, and Cults

History has demonstrated again and again that humankind has an alarming propensity to be swept up in bizarre crazes, to blindly follow deranged leaders, and to ignore clear, logical evidence in believing outlandish conspiracy stories. The United States has seen the Salem witch trials, there was a time when the citizenry was gripped by a tremendous fear that the government was being secretly infiltrated by Communist spies, for about half a decade there was a widespread belief that day care owners and workers were engaging in something called ritual Satanic abuse with the children under their care – despite there

being absolutely no physical evidence. These days, Americans are gripped by a deep fear of terror. Tens of millions of Americans believe the current president is or may be the anti-Christ (a demon). Probably hundreds of millions of people around the world don't believe the US landed men on the moon. The United States has also bred some truly deranged religious cults, probably no more so than the People's Temple, a cult that had built an agricultural commune in the South American nation of Guyana. In 1978, 919 members of the cult committed suicide at the instruction of its leader, Jim Jones. The examples above are all from the United States, but such behavior can be seen in cultures around the world. This course will look at these phenomena from various perspectives and try to come to some understanding of how it is possible that what most rational people consider to be truly irrational beliefs can become so widespread.

#### WSEM 1029: Bioethics

Recent advances in medical technology have made it possible to do many things never before possible in our quest to perfect the human body. One long-standing ethical problem has been that our social values and practices rarely change quickly enough to keep up with the pace of technological advances. Scholars in the biological sciences often approach new research projects with a question of "Can we?", while ethicists believe we should also be asking the question "Should we?" In this course, we will explore specific cases in which new medical technologies have met with ethical dilemmas. Should parents be allowed to use genetic therapy to choose the characteristics they prefer in their unborn children? If a disability such as deafness could be "cured" with technology, should we use that technology on children or adults? Should doctors be allowed to extend the life of a patient who wishes to die? In debating these questions, students will examine the arguments of academics writing across several disciplines – biology, ethics, medicine, disability rights – as well as writings from people whose bodies are at the center of these debates.

#### WSEM 1030: Women and Auto-ethnography

Our stories, our world. Autobiographical writing, whether for ourselves in private journals or for a public audience, is a genre that allows for self-discovery and the fashioning of our own identities. Auto-ethnography goes a step further, allowing the writer to examine their own life within the context of the larger world they inhabit. Famed auto-ethnographer Carolyn Ellis claims that it connects "the autobiographical and the personal to the cultural, social, and political." In this course, we will read through several shorter selections of women who have written auto-ethnographical accounts and one longer work. We will also read academic articles across several disciplines such as history, sociology, and anthropology, to learn the analytic tools most commonly used in ethnographic writing. Students will write three essays in which they will examine and interpret their place in society and history. As a second-semester writing course, students will build on their understanding of academic argumentation and learn to do more advanced work in using evidence, implementing research into their writing, and qualifying their argument.

#### WSEM 1031: Writing – Exploring the Scientific Method

How do we decide what is objectively "true"? For academics, a fundamental belief is that scientific inquiry is the best way to investigate the world before we come to any conclusions. But why? Under what conditions is the scientific method most productive and when is it most fallible? What are the limitations of using empirical evidence and rationality to order and make sense of the world around us? In this course, we will seek to answer these questions and to examine debates on how science has been thought about, used, and misused throughout history and in the contemporary world. We will read what is argued by authors across the disciplines – physics, medicine, history, and philosophy to name a few – to arrive at our own conclusions about the limits and the potentials of science. Students will write three essays in

which they will examine debates about the scientific process and put forward their own arguments on the topic. As a first-semester UG1 writing course, emphasis is placed on continuing work done in Access Academy writing courses, with a focus on the fundamentals of academic argumentation (constructing claims and supporting them with evidence) and writing as a process. In keeping with the mission of the AUW writing program, students will also learn and implement the ethical standards expected of academic writers.

#### WSEM 1034: Science and Culture

This course will look at the impact various sciences have had on the way we conceive of our “selves”, our minds, and our behaviors. Physiognomy and phrenology were in times past thought to be key to understanding human behavior. Today, evolutionary psychologists, socio-biologists and behavioral economists offer some unique and controversial explanations for our behavior. Neurobiologists, on the other hand, consider behavior to be largely the result of biological properties of the brain that are beyond our control and, for now at least, our full understanding. How do these ideas, many of which enter the popular imagination through mass media, affect culture? Do they? How have these affects changed over time? In this course, students will read scientific narratives written over the years the last two centuries and examine how their ideas, particularly as they relate to human behavior, alter (if they do at all) the way people understand themselves.

#### WSEM 1035: Histories of the Human Body

“If anything is sacred, the human body is sacred.” – Walt Whitman

Whether through biology, philosophy, medicine, anthropology, or art, our understandings of our place in the universe and our definitions of who we are have often relied on the meanings we attach to our bodies. In this course, we will examine interdisciplinary readings from the sciences, the social sciences, and the arts to explore the natural history and the cultural histories of the human body. Students will write three essays in which they will examine issues of embodiment, culture, health, and power to formulate their own written arguments. As a second -semester UG1 writing course, emphasis is placed on continuing work done in Access Academy and the first semester of UG1 writing, with an added focus on formulating a methodology, collecting field work, and integrating evidence into independently researched academic arguments. In keeping with the mission of the AUW writing program, students will also learn and implement the ethical standards expected of academic writers.

#### WSEM 1036: Indigeneity and Representation

The legacy of colonialism, whether by European or dominant local powers, can still be felt throughout the South and Southeast Asian region, and this legacy is intertwined with the ways indigenous people have been represented throughout history. In this course, we will examine how colonialism has affected indigenous cultures and how those same cultures have navigated through processes of identity formation, decolonization, and representation. Students will read texts by historians, political scientists, and experts in international development, but a primary means of study will be to read and hear accounts from people living within indigenous cultures themselves. Students will write three essays in the course, formulating their own arguments about the impacts of colonialism and contemporary global and regional issues that matter to indigenous communities. As a second -semester UG1 writing course, emphasis is placed on continuing work done in Access Academy and the first semester of UG1 writing, with an added focus on formulating a methodology, collecting field work, and integrating evidence into independently researched academic arguments. In keeping with the mission of the AUW writing program, students will also learn and implement the ethical standards expected of academic writers

#### WSEM 1038: Composition I: The Family and Society

Any student who has already taken one UG-1 writing seminar and passed should not register for this course, but wait to take Composition II in the spring. Before the early 1800s, it was a common belief in Europe that children were either evil or a source of constant trouble and that they only grew into successful adults by being treated harshly and beaten. Even more recently, before the 1940s, marriage in most countries of the world, whether in Asia, Africa, or North America, had little to do with “love” and more to do with the husband or wife your family picked for you. How did we move from these beliefs to the ones more commonly held today: that children are innocent and need to be nurtured and that marriage should be about finding one’s “soul mate,” the perfect romantic partner? Are our current beliefs necessarily better than the values of the past? In this course, students will examine different cultural beliefs about topics related to the family such as marriage and divorce, raising children, and creating a home from the perspectives of different disciplines in the social sciences, the humanities, and the sciences. In doing so, students will examine their own beliefs about the family and explore the logical, ethical, and legal reasons supporting those beliefs. Students will write two longer research essays about the course topic as well as several shorter reflective pieces about their writing, reading, and study processes. As a first semester UG-1 writing course, emphasis is placed on continuing work done in Access Academy writing courses, with a focus on the fundamentals of academic argumentation (constructing claims and supporting them with evidence) and writing as a process. In keeping with the mission of the AUW writing program, students will also learn and implement the ethical standards expected of academic writers.

#### WSEM 1040: Composition I: Science and Religion

“Gravity explains the motions of the planets, but it cannot explain who sets the planets in motion.”- Sir Isaac Newton

One “common sense” belief about the relationship between science and religion is that they have always been at war with each other, whether in Galileo’s persecution by the Catholic Church during the early 17th century or the influence that conservative religious groups have today on political decisions about issues such as cloning or stem cell research. When we move beyond “common sense,” however, we find that this belief about a long history of conflict may be more of a myth than a reality and that the major world religions - Islam, Hinduism, Buddhism, and Christianity - all have long traditions of using scientific inquiry to complement spiritual belief. As students in this course learn about methodologies in research writing, they will also study the different methods and ways of knowing the world that are used by both science and religion and investigate not just the points of disagreement between the two fields, but also the points of mutual support. In our study, we will examine arguments from experts in many disciplines, ranging from physics to anthropology to philosophy. Students will write two longer research essays about the course topic as well as several shorter reflective pieces about their writing, reading, and study processes. As a first semester UG-1 writing course, emphasis is placed on continuing work done in Access Academy writing courses, with a focus on the fundamentals of academic argumentation (constructing claims and supporting them with evidence) and writing as a process. In keeping with the mission of the AUW writing program, students will also learn and implement the ethical standards expected of academic writers.

#### Writing Seminar/Composition II: Epidemics

Current events surrounding the Ebola epidemic demonstrate how the spread of new diseases can lead to new challenges not just from a medical or public health perspective, but also from a social perspective, as misinformation and conspiracies about the origins of these diseases create the potential for panic. In this course, students will examine “case studies” of historical epidemics, piecing together how popular

ideologies of disease are formed and circulated, and how those ideologies affect individual lives. We will approach issues in the course topic from the perspective of several different disciplines, including public health, literature, biology, history and international development. Students will write two research essays in this course along with several shorter pieces of writing to formulate their own arguments about the effects epidemics have on individuals and communities. As a second-semester UG1 writing course, emphasis will be placed on continuing work done in Access Academy and the first semester of UG1 writing, with an added focus on formulating a methodology and learning advanced techniques for integrating evidence into academic arguments. In keeping with the mission of the UG1 Writing Program, students will also continue to learn and implement the ethical standards expected of academic writers.

#### WSEM 1052: Composition II: Writing Ethnography: Ethics and Methods

“In order for ethnography to live, its object must die; by dying, the object takes its revenge for being ‘discovered’ and with its death defies the science that wants to grasp it.” – Jean Baudrillard

What happens when we take, as the subject of study, people and their cultures? Anthropology at its best can help us understand and appreciate the diversity of human experience, but at its worst has been used as a tool for promoting and justifying imperialism, racism, and colonial exploitation. Knowing this, what responsibilities do we have as academics when interpreting and representing cultural practices? In this course, students will learn basic methods of cultural anthropology while exploring the philosophical, political, ethical, and rhetorical debates about cultural representation and self-representation. Students will write two research essays in this course along with several shorter pieces of writing exploring their own locations in culture. As a second-semester UG1 writing course, emphasis will be placed on continuing work done in Access Academy and the first semester of UG1 writing, with an added focus on learning basic ethical and methodological practices in doing qualitative research. In keeping with the mission of the UG1 Writing Program, students will also continue to learn and implement the ethical standards expected of academic writers.

#### Writing Seminar/Composition II: Gender and Current event

This course will broadly consider how gender intersects with justice and conflict and draw on readings from current events, especially in greater South Asia, to consider these issues in more depth. We will constantly interrogate to what extent gender impacts the reporting of, and the experience of, events such as elections, border disputes, and war. Through readings of both scholarly articles as well as online journalism, students will be introduced to different writing styles depending upon the audience in question. Students will be required to keep up with the daily events happening in the region by reading Foreign Policy: South Asia Report and the Daily Star on an on-going basis. We will look at these readings in depth and examine how the authors present and structure their argument, paying particular attention as to how gender is presented. Students will then be encouraged throughout the semester to use this method to write their own critical reflections on the current events being discussed in class. Students will write critical reflection pieces on current events on an on-going basis for the class, and in addition, will also write three more in-depth research papers. The first will be a response to a given prompt about the issues discussed in class, the second will be in response to a more open-ended research question, and the third will give the students the opportunity to write their own research proposal, including a lengthy literature review, culminating in a structured argumentative essay on a topic of their choosing.



## Listings for the Majors

### Bioinformatics

#### BINF2000 Introduction to Bioinformatics

Bioinformatics is an emerging interdisciplinary field of science which combines computer science and information technology, statistics, mathematics, engineering, chemistry, physics and biological science to acquire, process, manage, analyze, interpret and disseminate life sciences data. It is an union of information technology and Biotechnology. It integrates computers, software tools and databases to address life science related questions. Data is everywhere and its influence and practical omnipresence across multiple academic and industrial institutions are rapidly growing. There is high demand for people with bioinformatics knowledge to serve in the Biotechnology firm, Pharmacy, Software companies and in academic institutions. Various basic tools (FASTA, BLAST, BLAT, RASMOL), databases (GENBANK, Pubmed, PDB) and software (RASMOL, Ligand Explorer) will be used to analyze large scale life science data obtained from (Through Genome sequencing, Protein sequencing, Gel electrophoresis, NMR Spectroscopy, X-Ray Diffraction, and microarray)

#### BINF4001 Advanced Bioinformatics (with lab)

Advanced Bioinformatics (with lab) is offered for the students who have already been familiar with the course "Introduction to Bioinformatics". Briefly, this course is designed on the basis of interdisciplinary approaches in order to extend the knowledge about bioinformatic analysis of genomic and proteomic data. Students will have a deeper understanding of machine learning, computer programming and other cutting edge advances that are playing a crucial role in handling exponential growth of biological data.

Prerequisite(s): Introduction to Bioinformatics, Biology I.

#### CSCI 3003: Database Management System

Evolution of database management systems, Entity Relationship Modeling and Design, Relational Data Model and Relational Algebra, Structured Query Language, Transaction Processing, Concurrency Control and Recovery, Client Server and Distributed databases.

#### BIOL 3601: Cell & Molecular Biology (with Lab)

This course provides an in depth study of the molecular and biochemical bases for cell structure and functions. Membrane organization, solute translocation, endocytosis and exocytosis, mechanisms of signal transduction, growth control, and oncogenesis will be covered. Mechanisms of DNA replication, repair, as well as mechanisms of gene expression in both prokaryotes and eukaryotes will be discussed. Modern techniques for DNA manipulation will also be examined.

#### BIOL 3600: Genes and Genomics (with Lab)

The discipline of genetics has been developing rapidly since the discovery of the famous Watson & Crick structure of DNA in 1953. Classical genetic studies have been replaced by techniques in molecular genetics, and, most recently, genomics and bioinformatics as methods to study the mechanisms of inheritance. This course will discuss genetic approaches to the study of biological function with particular focus on experimental design. The topics include: structure and function of genes, chromosomes and genomes, biological variation resulting from recombination, mutation, and selection, use of genetic methods to analyze protein function, gene regulation and inherited disease. We will also consider the social, medical and agricultural applications of genetic technologies with particular focus on their impact on countries in S. Asia in comparison with the U.S. and Europe.

**BIOL 3002: Biochemistry (with Lab)**

Biochemistry encompasses the chemical and physical nature of biological macromolecules. We will study biochemical pathways in living organisms, with emphasis given to the synthesis and metabolism of the four major classes of macromolecules, carbohydrates, lipids, proteins and nucleic acids, and their key roles in life processes. Discussions will also include biochemistry in nutrition and its influence on eating behavior and biochemical connections with diseases. Lab sessions will cover the principles and techniques of experimental biochemistry, focusing on isolation methods and techniques for analyzing structure and function, and qualitative and quantitative studies of macromolecules within the cell.

Prerequisite(s): Satisfactory completion of Organic Chemistry.

**BIOL 4101: AbbVie Lectures: Scientific Research with Applications in Medicine and Public Health**

AbbVie scientists will present practical applications of their scientific research in pharmacology, medical science and public health. Topics include drug discovery and development, regulation of the drug industry, and control of disease; the topics complement material studied in the course Human Anatomy and Physiology. Students will be assigned papers to read before a weekly teleconference, during which the research process and outcome will be discussed with the leading scientist. This is a 1-credit course, and assessment will be based on participation in group discussions.

**BINF 5000: Senior Seminar/Thesis in Bioinformatics**

An intensive research project undertaken in collaboration with a faculty member. The student will be expected to write a short proposal, conduct a literature search, design and conduct some independent research (laboratory, field, computational, or library), and present the results in oral and written (thesis) form.

Prerequisite(s): Satisfactory completion of the major courses and at the discretion of the instructor.

## **Economics**

**PPE/ECON 2100: Principles of Microeconomics**

This course gives you an introduction to microeconomics. We will be analyzing the fundamental concepts with an emphasis on applications of economic tools to modern day issues. This course will familiarize you with the determinants of the behavior of individuals and firms, the decisions they make given the set of choices available to them and how they respond to incentives. By studying the behavior and interaction of individual firms and consumers you will understand how industries and markets operate and evolve, why they differ from each other, and how they are affected by various public policies and global economic events.

**PPE/ECON 2101: Principles of Macroeconomics**

Economics is divided into two main branches: Microeconomics and Macroeconomics. While microeconomics discusses the behavior of relatively small entities such as consumers and firms, macroeconomics deals with the “big picture”. This course introduces students to the basic principles of

macroeconomics. Hence, the course will examine macro variables such as output, unemployment, interest rates, and inflation which are important in gauging the state of the economy.

We will also look at how these variables have behaved historically as well as uncover the causes underlying their behavior. The course will also consider economic fluctuations. Particular importance will be placed on understanding the business cycle — not only why the economy might enter a recession but what policy options the government and the Central bank have at their disposal to affect the business cycle and the impact of those macroeconomic policies in the short run and in the long run.

#### PPE 3008: The United Nations Security Council and War

This course is an exploration of UN Security Council's part in addressing the problem of war, both civil and international. The Council is arguably the most powerful international organ in the world—the only one responsible for international peace and security—and has played a part in the reduction of international conflict since 1945. However, the Council has also acted in a limited and selective manner and its work has often resulted in failure. The Council's very composition—especially the presence on it of five permanent members—has also been criticized as anachronistic and inadequate to tackle the challenges of today's world. Through a series of case-studies that will have both a regional focus (Rwanda, Yugoslavia, Iraq, Libya and Syria) and a thematic one (terrorism, the challenge of ISIS, Ebola), this course will consider the advantages and disadvantages of the Council's deliberations. Relying on the direct professional experience of the course's instructor—who worked as a official at UN Headquarters in New York—students will be exposed to a considerable amount of confidential materials that will shed light on the 'behind-the- scene' reasons for many of the sensitive decisions taken by the Council in recent years.

#### PPE 3012: Political Violence (WI)

This course is designed to give students a broad overview of issues in political violence. It will include readings from comparative politics, international relations, and sociology that focus on the logic of collective violence and the dynamics of state repression. We will cover such topics as dissent and opposition and the motivations behind them, government repression of dissent, election violence, violence perpetrated by government-sponsored security agents, and what effects (if any) international organizations have on rates of political violence of citizens or the government. Students will need a basic understanding of politics accomplished through Introduction to International Relations, Introduction to Comparative Politics, or permission from the course instructor.

#### PPE 3100: Intermediate Microeconomics

This course is an advanced treatment of economics concepts that students have already been exposed to in the Principles of Microeconomics course. Hence, the course is somewhat abstract and reasonably technical. The course starts with individual preference, and analyzes, together with prices, how individual preferences determine individual demand and market demand. Then it analyzes the behavior of individual firms such as Profit Maximization, Cost Minimization and supply of goods and services. Different market structures such as Perfect Competition with a lot of buyers and sellers, Monopoly with a single seller and a lot of buyers are considered. It also deals with market structure such as Oligopoly with interdependent strategic behavior of rival firms. Hence, game theory that focuses on strategic behavior and helps analyze oligopolistic competition will also be introduced. Then, a general equilibrium framework under which an economy allocates scarce resources in an efficient way is analyzed. In addition, various cases of Market failures such as Externalities, Public Goods etc. are also examined.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics and Calculus I.

**PPE 3101: Intermediate Macroeconomics** Intermediate Macroeconomics underlines the application of economic theory to real-world data and policy. It builds up the tools, knowledge and expertise essential to work as a practicing macroeconomist. These may comprise an appraisal of the evidence on economic expansion, the flexible-price macroeconomic model, models of long run exogenous and endogenous growth as well as the functioning of capital based macroeconomics, on the one hand. On the other hand, these contain an evaluation of the evidence regarding wage-price rigidity, model in which markets do not always clear and hence the possibility of under full employment 'equilibrium', in-depth comparative analysis of the flexible and sticky price models, macroeconomic models that examine monetary and fiscal policy as well as consumption and investment in a small open economy context.

**Prerequisite(s):** Satisfactory completion of Principles of Microeconomics, Principles of Macroeconomics, and Calculus I.

**PPE/ECON 3102: Econometrics**

Econometrics is a combination of Economic Theory, Statistics and Mathematics. However, econometrics is not merely an economic statistics, nor is it only an application of mathematics to economic theory; it is rather a combination of different aspects of quantitative approach to economics. Hence, in this course, both mathematical and statistical tools is employed to test the economic theories and estimating economic parameters/relations such as Multiplier, Marginal Propensity to Consume, Marginal Propensity to Invest, Price elasticity of Demand for a commodity, Elasticity of Substitution between different Factors of Production etc. using economic data. Testing economic theories and estimating economic parameters/relations are of utmost importance. They are particularly important in prescribing public policies that involve the well-being of millions of people, and are also important in business and other sectors. The techniques discussed in this course can be used in analyzing data of other social sciences such as Politics, Sociology, Anthropology, social work etc.

**Prerequisite(s):** Satisfactory completion of Principles of Microeconomics, Principles of Macroeconomics, Probability and Statistics, and Calculus I.

**PPE 3110: Microeconomics of Development**

While some countries in the world grew at an unprecedented rate in the last fifty years, others were caught in abject poverty, severe income inequality and stagnation. Even those countries that have experienced economic growth, the economic changes were not always translated into proportional social changes and wellbeing. Again some poor countries made enormous strides in terms of achieving greater social changes in the presence of sluggish economic growth. This course begins by exploring the concepts of development and reviewing the relationship between poverty, inequality, economic growth and development. We will use economic principles to explore and analyze the core issues of economic development in that affects more than five billion people living in the developing world, with a particular emphasis on the decision making process of these poor households.

**Prerequisite(s):** Satisfactory completion of Principles of Microeconomics

**PPE 3112: Labor Economics**

This course provides a discussion of the economics of the labor market. The course begins with an overview of the trends and institutional features that characterize the labor market. Particular attention is placed on the causes and consequences of rising female labor force participation rates, the growth of the service sector, and other labor market issues. After this introductory discussion, the focus of the course turns to a discussion of the theory of labor demand. In this section of the course, students examine

the short-run and long-run determinants of labor demand, the determinants of the elasticity of labor demand, and the importance of demand. Students examine the tradeoff that occurs between the number of workers hired and the length of the work week. The next section of the course provides a discussion of the determinants of labor supply. This discussion begins with an examination of labor supply in a simple model in which workers face a choice between labor and leisure. This is followed by a discussion of the household production model in which individuals must choose to allocate time among market and various types of nonmarket activities. The effects of alternative types of welfare, unemployment compensation, and social security systems on labor supply are then examined. The concluding section of the course provides an examination of alternative sources of wage differentials. This portion of the course provides an examination of the economics of education, unions, discrimination, compensating wage differentials, and other determinants of wage differences.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics

#### PPE 3115: Game Theory

This course is an introductory course into strategic decision making. The beginning of the course will focus on developing the techniques necessary to solve games. In the latter part of the course game theoretic analysis will be applied to a variety of topics, including, but not limited to, principal agent problems, auctions, and voting. The hope is that the student can see how the tools developed early in the course can be applied to a vast array of problems.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics

#### PPE/ECON 3116: Environmental Economics

This course will explore the following topics: The Evolution of Environmental Economics; The Visions of the Future; Externalities and Environmental Problems; Regulating the Market; The State of Environment -- Country Experiences; Development, Poverty and Environment; and Environmental Protection and Marketing Strategies.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics, Principles of Macroeconomics

#### Econ 3215: Principles of Marketing

Marketing is an important tool and a key factor for the success of business. In our daily life, we are exposed to excessive marketing messages and most of our purchasing decisions are strongly influenced by producers' and organizational marketing efforts. Marketing is everywhere as an inescapable feature of this contemporary world. This course "Principles of Marketing" provides an introduction to the essentials of marketing strategies for the analysis of consumers and competitors (key concepts, methods of analysis, strategies and tactics), which is very critical to manage profitable customer relationships in today's dynamic and interconnected environment. This course will familiarize the principles of marketing good and services, with the help of elements of marketing mix (product, pricing, promotion, and distribution strategies). This course will expand the knowledge of the students for many premeditated actions of top performing brands and will enhance the students' capability for decision making about the evaluation for real life business with insights into the relevant issues and tasks that the competitive firms face.

#### PPE 4100: Economics of Inequality

This course introduces students to some of very important today's policy debates of poverty and inequality. This course will provide students up to date knowledge for measurement and the relations for both phenomena, with the help of fundamental concepts, theories and methodologies that are used by

economists. For the solution of contemporary economic world problem to combat poverty, an historical perspective and details of long-term view of income distribution in human societies will be explained. This course will help to examine the political and philosophical perspectives related to the access to resources and their distribution. An overview of global economy will help in exploring the effectiveness of some of the policies that are thought to minimize poverty and to reduce the gap between the rich and poor.

Pre-requisites: Principles of Microeconomics and Principle of Macroeconomics.

#### PPE 4101: Monetary Economics

Monetary Economics is one of the elective courses, designed for students studying Economics as major . The course develops a number of theoretical frameworks for the analysis of domestic economic perspective related to money, market for money, monetary transmission mechanisms, which provides a base for the understanding of classical and Keynesian approaches for monetary theory and their empirical evidence. Second part of the course focuses on the issues of monetary policy implementation in the closed and open economy contexts, like determinants of the price level, rate of inflation, exchange rate in different regimes.

Pre-requisites: Principles of Microeconomics and Principle of Macroeconomics

#### PPE 4102: Economics of Money, Banking and Financial Markets.

In a globalized world banking and Finance is getting more important now a days. The interaction between banking and financial markets in an economic activity is thus more important. The aim of this course is to provide the in depth knowledge of banking and finance to the undergraduate students. It will focus on different concepts and issues of monetary and fiscal policies, which enhance the financial flows in the economy. In addition, the importance of commercial banking, the role of central bank and capital market will be discussed in the course. After completion of this course the students will gather a good knowledge on banking and financial systems. Pre-requisites: Principles of Microeconomics and Principle of Macroeconomics.

#### PPE/ECON 4104: Political Economy of the Middle East and North Africa

This course will trace how resources and international economic dynamics have shaped the political, economic, and social trajectories of countries in the Middle East and North Africa. The region is often presented as the most geo- strategically important in the world, because of its resources and location. We will consider several questions in our attempt to map the relationship between economic factors and political dynamics: What are the different types of development strategies states adopted after independence? How did such strategies impact the distribution of domestic power and resources (and vice versa)? What is the relationship between access to resources and authoritarianism? Where did states, even those without oil reserves, find the resources necessary to set up police states? What role do economic factors play in interstate and intrastate conflicts in the region? How did fluctuations in the global supply of oil, debt crises, and structural adjustment policies affect state responsiveness and popular participation? From what sources do social movements and civic associations in the region get funding? Does the inadequacy of various economic policies explain the Arab uprisings since 2011? This writing intensive course will give students the opportunity to write policy briefs, op- eds, and research papers, and thereby strengthen their ability to present political and economic analysis for both academic and non-academic audiences.

#### ECON 4107: Advanced Mathematical Economics

Mathematics is an essential tool to analyze economic phenomena in almost all branches of economics. In this course, the essential mathematical tools used in economics such as Simultaneous Equations Systems, Set Theory, Matrix algebra, derivatives, static analysis, optimization (both free and constraint), integration, and inequality constraint both in linear and nonlinear optimization problems will be introduced and will be used in analyzing economic phenomena (both micro and macro contexts). Difference and differential equations as well as Dynamic optimization techniques and their application in solving economic problems will also be discussed. This course will improve your understanding of economic theories and make other economics courses easier for you. This course will also make your first year graduate school a little easier. Pre requisites: Calculus I, Principles of Microeconomics and Principles of Macroeconomics

## **Politics, Philosophy, and Economics**

### **PPE 3001: The State of Nature and the Nature of the State**

This course examines the thought-device of the "state of nature" - a situation in which human beings live without a political sovereign. We will consider how this concept has been understood in the history of philosophy and social theory, by thinkers such as Aristotle, Hobbes, Rousseau and Freud. We will also explore the treatment of "nature" and the "state of nature" in works of film and literature, including Joseph Conrad's novel Heart of Darkness. Throughout the course, we will focus on how the "state of nature" has been used to explain, justify, or criticize "the nature of the state" - i.e. man's condition within political community under a sovereign.

### **PPE 3004: Metaphysics**

Metaphysics is an important branch of philosophy querying questions like: What is/are really out there in the world? What is/are basic/fundamental? Is the world out there independent from me? Is a person really real— in the sense of being basic or fundamental and thus irreducible feature of the world? Or a person is a construction and thus an illusion; can be reduced to more basic entities like atoms and sub-atomic particles? Is the world basically made of facts and events? Or, made of things or objects? Do the abstract terms like "three", "courage", and "womanhood" refer to something real out there? In this course we will mainly focus on the last question. We will see how the Platonists like to argue for the entities allegedly referred to by those abstract terms. We will also consider the arguments countering the Platonist view. This debate is not confined only in philosophy; it echoes in various other disciplines: in biology, physics and in history for example. Having this course you are expected to gain a deep insight about those disciplines as well. The course is meant for the senior undergraduates. But the only prerequisite for your taking this course is your high motivation.

### **PPE 3003: Comparative Politics of Religion and Secularism**

In the mid-20th century, the secularization hypothesis, which predicted the triumph of secularism and retreat of religion from public life, enjoyed popularity in academic and political circles. By the late 20th century, however, many scholars and policy-makers emphasized the "resurgence" of religion. This course will give students the opportunity to investigate the scope and impact of this apparent "resurgence." Is secularism a general ideological failure or simply less politically expedient under certain political conditions? Does religion exercise a distinct effect on politics or does it just feed into existing political equations? To address such questions, we will examine case studies including the United States, France, the Netherlands, Tunisia, Poland, Egypt, Turkey, Israel, Uzbekistan, Pakistan, Bangladesh, Sri Lanka, and Indonesia.

#### PPE 3005: Space, Time, and Justice

This course examines whether ideals of justice should be applied across space and time, by examining debates in global and intergenerational justice. The first part of the course focuses on global justice. Should principles of distributive justice be applied globally or are they only relevant to particular societies? Is global justice an unrealistic goal? Do people in wealthy nations have a duty to give to the starving overseas? Is poverty a human rights violation? Do we have obligations towards our co-nationals and if so, do these obligations defeat the claims of global justice? The second part of the course focuses on intergenerational justice. Should we rectify historical injustices? Should people be compensated for injustices against their ancestors? Do we have duties towards future generations? These and other questions will be addressed in this course.

#### PPE 3007: Distributive Justice

Should society have a just distribution of wealth? What is a just distribution? One that is equal, lets people keep what they earn, promotes overall happiness, gives people what they deserve, or something else? This course examines whether distributive justice should be a goal of society and examines competing theories of distributive justice. The theories to be examined are utilitarianism, liberal egalitarianism, libertarianism, deservingness, Marxism, and communitarianism. In examining these theories, the course will cover topics such as taxation and incentives, unconditional basic income, market socialism, and the moral limits of the market. Thinkers covered include Rawls, Nozick, Gauthier, Dworkin, Sen, Marx, and Walzer.

This course is recommended for UG3s only.

#### ASIA/ PPE 3009: Conflict Management and Post-War Development

This course is a seminar on the management and resolution of civil conflict and factors that stimulate development in post-conflict societies. How and why do states decide to resolve their conflicts? When are conflict and war amenable to the opportunity for management? Do some strategies or compositions of mediators and negotiators have higher rates of success at managing conflicts than others? Why do some post-conflict societies experience rapid growth and development while others experience stunted growth and often collapse back into civil war? In this course, the student will be exposed to investigations into these questions, learning about the occurrence and success (or failure) of conflict management through an analytical and historical lens. We will use case studies of various conflicts to analyze theories of conflict management, and we will also spend time discussing how the most effective conflict management techniques might differ across regions.

#### PPE 3105: Introduction to International Relations

This course is meant to acquaint students with the core concepts, processes, and issues of international relations (IR). The first portion of the course explores essential concepts: the actors in international relations, how foreign policy is made, the role of power, and the most prominent general approaches to understanding IR. The remaining sections of the course examine contemporary and future problems in the international system, including armed conflict, economics, demography, and the environment. It should be noted that this is not a course in current events, although some reference will be made to current events in discussing the theories and topics covered in the course. My goal is to provide students with the tools to evaluate events themselves and form their own opinions. Students are expected to attend every class meeting, having completed the assigned reading and thought about the discussion points listed in the syllabus. Class performance will be measured with two exams that combine multiple choice, short answer, and map identification questions; class attendance; 4 short papers; and one final



paper. Upon completion of this course, students should have a strong basic understanding of international relations and a foundation for taking upper-division courses on the subject.

#### PPE 3106: Introduction to Comparative Politics

This course provides students with the tools necessary to analyze complex political phenomena. Through engagement with different theoretical approaches that highlight the roles of leaders, institutions, the state, and civil society, we will assess political outcomes such as economic development, ethnic conflict, and democratization. Drawing on case studies will enable us to compare different political systems and address questions about the malleability of ethnic identity, the relationship between economic development and regime type, and the impact of international factors on domestic power dynamics. This course underlines how different theoretical approaches can shape our understanding(s) of political events and narratives.

#### PPE / ASIA 3201: Civil Society and Social Movements

What do we mean by civil society and why do we think it is important? What is the role of civil society in making a society stronger? What are the “uncivil” dimensions of civil society? In this course we will look at the dimensions of civic associations that can help to mediate conflict and build trust or exacerbate conflict and increase the separateness between communities. Conceptualizing social movements as an important kind of social action in the realm of civil society, we will then examine various cases of social movements in Asia to develop a better understanding of what is a social movement, how it is built and sustained, and what are its outcomes, at both local and global levels.

#### PPE 3202: Humanitarianism & Politics

The field of humanitarianism has significantly changed since the end of the Cold War. Whereas in the past, humanitarian relief was largely ad hoc and un-coordinated, there is now a complex network of NGOs, states, and international organizations that are engaged in humanitarian work. This course explores the dynamics of humanitarianism, that is, how the field of humanitarianism has evolved as a result of the interplay between politics and the provision of emergency relief. Humanitarianism is comprised of principles about the legitimate deployment of power on behalf of distant suffering strangers. At the same time, while humanitarian governance purports to act on behalf of the welfare of others, this raises important questions about when relief crosses the line towards paternalism. Who is a legitimate humanitarian actor? How, and to whom, are humanitarian actors accountable? To what ends are humanitarian resources deployed? This course will provide a broad historical perspective on the emergence of the contemporary humanitarian system, explore some of the challenges and dilemmas currently faced by different actors in specific crises, and speculate about the future of this expanding field. It provides an opportunity to reflect on the limitations of humanitarianism as either an antidote to catastrophic change or as a means to engineer positive political transformation.

#### ASIA / PPE 3203: Politics in South Asia

This course provides an introduction to the politics of India, Pakistan, Bangladesh, Sri Lanka, and Nepal. The first part of the course constitutes a brief survey of the political histories of each country. The second part explores the following topics and invites comparison among the different countries: Caste, Class, and Ethnicity; Communalism, State Structures, and Civil Society; Political Movements, Insurrections, and Revolution; Local Structures of Power; Culture, Religion, and Gender; The Political Economy of Development; and Parties & Elections.

#### PPE / ASIA 3205: Gender, Peace & Conflict in Asia

Gender infuses the world around us. Across the globe, we see many ways in which gender expectations and capabilities relate to disparities in economic status, educational attainment, health, legal rights and other areas between men and women. In continuing conflicts and in building peace, gender plays a central role, as well. Conceptions of gender have been used to justify domination, rape, mutilation, imprisonment and killing, interventions, as well as participation in movements for peace, solidarity, and resistance. This course provides an introduction to conflict and peace as gendered phenomena. Focusing on experiences across Asia (and beyond), we will consider the social construction of masculinities and femininities in different contexts and from different perspectives. We will make use of theoretical texts, case studies from the region, policy reports, contemporary news articles, films, and our own experiences and views. Throughout the semester, we will develop our skills in using gender as an important “lens” to examine dimensions of conflict and peace.

#### PPE/ASIA 3206: Political Identities in Asia

How do identities become politicized? How are identities constructed to impact on power? Who controls the meaning of a given identity in society? How do we understand and analyze the “us” vs. “them” identity conflicts in our societies? This course will draw on theories from sociology, political science, anthropology and economics to explore these questions from a comparative perspective in both Asia and elsewhere. We will utilize readings, projects, discussions and films to delve not only into the politics of identity regarding nation, class and gender, but also lifestyles and differing visions of the good society.

#### PPE 3207: Global Science and Global Politics

Scientific and technological advancements, from cell phones to vaccines to nuclear power plants to genetically modified organisms, are progressing rapidly and profoundly affect both developed and developing countries. In this class, we will investigate claims of expertise, evidence, intellectual property, and development through case studies such as sex selection, genetically modified organisms, nuclear energy and biosecurity, and ask some of the following questions: How do governments balance tensions between promoting its own national interests and cooperating with the international community? What happens to politics when state officials fail to inform citizens of real threats to life? What are the moral and political consequences of remedies available in the wake of technological disasters (such as the Bhopal chemical leak and the Chernobyl nuclear reactor explosion)? How does the global nature of science affect the outputs of science?

#### PPE/PSYC 3208: Political Psychology

Political psychology is an inter-disciplinary field of social science inquiry, with roots in political science and mainly social and cognitive psychology. Political psychologists attempt to understand the psychological underpinnings, roots, and consequences of political behavior. Hence, this field considers the relationship between human thought and political behavior - the psychological account of political phenomena and the political mind. A key theme that will run through the course is the role of emotions on ‘rational’ political decision making. Political psychology has a practical arm. It explores the dynamics of important ‘real-world’ phenomena in ways that provide valuable and useful information about politics and behavior. This helps us understand why political events unfold as they do. This course is divided into three sections – considering psychological issues behind individual political figures and leadership; institutional behavior; and political perceptions, emotions, and motivated actions of the public. This will be examined mainly in the backdrop of personality and social influence. Thus, the course will address topics such as understanding behaviors of well-known political figures and historical/political events (past and present); voting behavior; media representations; leadership and decision making; public attitude formation; racism and prejudice; conflict, accepting and participating in violence.

#### PPE 3209: Gender, Justice and War

This course begins with an exploration of gender as a social construction in the theory and practice of international relations, and will then go on to explore some of the myriad ways in which gender features in issues of war and peace. What are gendered relations of power? What role, if any, does gender play in the causes and consequences of war? How is this manifested? We will explore topics such as masculinities and war, sexual violence in war, gender and nationalism, the war on terror and feminist ethics in order to understand the relationships between gender, war and peace. Throughout the course, a great deal of emphasis will be placed on empirical applications of the concepts learnt.

#### PPE 3210: Contemporary Sociological Theory

This course introduces the current approaches and perspectives within the field of sociology. Key topics and debates that will be covered include symbolic interactionism, phenomenology, structuralism, network theory, critical theory, feminist theory and modernity/postmodernity. Thus, both the macro level social structures that shape society and the micro level social interactions that occur between individuals will be considered. The works of major figures such as Foucault, Giddens, Bourdieu, Bauman, and Habermas will all be examined. Students will be encouraged to reflect on how sociological theory is relevant to modern life, the impact individuals can have on social structures and the nature of social action and conflict.

#### PPE 3211: Global Governance

The world is currently carved up into states that are jealous of their sovereignty. The world is full of problems and conflicts that cross state- borders or concern people in more than one state. These two facts about the world set up a number of challenges and the goal of this class is to examine how the international community meets those challenges. In other words we will explore the myriad ways that issues with a global reach are managed and governed sometimes well and sometimes poorly. This includes traditional security concerns like the spread of weapons of mass destruction and genocide, along with conflicts over ideas and resources like violations of human rights, human security, trade disputes, North-South tension, and ecological degradation. These varied issues have been and continue to be addressed through diverse means and we will explore the role of norms, multilateral diplomacy, intergovernmental organizations (IGOs), and non - governmental organizations (NGOs) in management and governance on the global stage. The course begins with an examination of the actors that have been tasked with managing global problems— their nature and their roles. We will explore the history and functions of multilateral treaties, global and regional IGOs, and NGOs along with the theoretical tools that help us to understand when cooperation and effective management is likely (and when it is not). The rest of the course is devoted to the study of specific topics in global governance and the diverse ways that the international community has responded to them. At the end of the course you should be able to answer these questions about a full range of global issues. The ultimate objective of the class is thus to provide you with a better understanding of the nature of transnational problems in the world and, more importantly, how they are addressed and governed.

#### PPE 3217: Comparative Politics and Democratization

In comparative politics we compare the elements of government and politics in different countries, and look for explanations of how different political systems are formed and how they operate. In this course we begin with an inquiry into the modern concepts of state and nation, and then consider how political-economic factors, social and cultural factors, and other conditions might affect government and politics in different countries. One of the major topics we will grapple with is democracy and democratization throughout the world. How we define democracy, its relationship to political culture and economic growth, and different processes of democratization will be discussed. There is ongoing debate over what

are the necessary conditions or antecedents of democracy and what are its effects, in terms of economic structure and development, public deliberation and participation, and political accountability— we will explore these topics and much more. Later in the course, we will apply these concepts to a comparison of India and Pakistan and consider explanations for the varying success of democratic consolidation in those two countries.

#### PPE 3218: Democratic Theory

This course examines the idea of democracy. What is democracy? Is it an ideal form of government? The course will look at the development of democracy from the time of ancient Athens to the modern state. We will examine Plato's critique of democracy and examine various justifications for democracy in detail. Different types of democracies, such as direct democracy, participatory democracy, and deliberative democracy will be discussed. The course also looks at some issues in democratic theory such as the right to vote, majority-rule, proportional representation, and judicial review. We will also see how ideas in democratic theory apply to real nations including those in South Asia. The course assessment will consist of participation, two essays, and a final exam.

#### PPE 3250: Migration, Mobility and Development

The various and dynamic flows of people, ideas and things among locales, nations and regions affect social, economic and political development. The primary aim of this course is to link the agency of movement in forms such as travel and tourism, communication and transportation technologies, mobility and migration to the varying levels and spatial patterns of development. Transfer and transition are taken then as fundamental to human affairs thereby continuously shaping not only constellations of power, but also individual identities and everyday lives. Special attention will be paid to the art and science of representing flows, circuits and networks across the surface of the earth.

This course counts towards the minor in Developmental Studies or as a PPE-Politics elective.

#### PPE 3251: The Parliament of Man? The Role of the United Nations on World Politics

This course introduces students to the complexities in the political development of the United Nations. Students will learn how the organization operates, what its relationship with external agents is, and who in New York decides what exactly. The course will also analyse how the UN has responded in the past—and is responding today—to a number of global issues such as international peace and security, humanitarian assistance, post-conflict peace-building and reconstruction. A theoretical perspective will be accompanied by a number of practical case-studies.

This course counts as a PPE- Politics elective.

#### PPE 3252: Research Methods in Political Analysis

This course introduces the strategies and techniques of scientific research in political science. It provides the basics of social science inquiry and the means by which social science research is performed. Students are expected to learn how to examine various types of political phenomena with appropriate approaches. To this end, this course covers topics including research design, causal inference, hypotheses and variables, measurement, basic statistical techniques, and other forms of social science inquiry such as game theory and experimentation. It also addresses bad social science— misleading or wrong work that claims to have objective validity. What you learn in this course will enable you to be a better consumer of social science literature and statistics in future classes and elsewhere. Some of you may choose to undertake original social science research, and this class will provide you the foundation for that work.

#### PSYCH/PPE 3300: Leadership, Politics and Psychology

This course considers psychological issues behind leadership, institutional behavior, political perception, emotions and motivated actions. Leadership includes understanding the self as well as motivating, inspiring, managing, guiding, and supporting others to function ethically and effectively. The key aspect of this course is that it offers a theoretical understanding as well as a practical training to understanding leadership behavior from a psychological perspective. The theoretical component will focus on the mind and behavior of leaders and leadership from cognitive, social, and personality psychology perspectives. Leadership will be evaluated as a process of influence and empowerment, and types of leadership such as transformational, authentic, situational, and educational leadership will be critically assessed. The course will address topics such as understanding behaviors of well-known leaders and political figures and historical/political events (past and present). The theoretical component will also include understanding how the contextual situations affect the individual, group dynamics, emotional intelligence, and interpersonal conflict. The practical component will focus on self-development, self-awareness, and self-confidence. Students will be encouraged to re-evaluate themselves in terms of how they perceive their personal and social world; improve the way they relate to other people in society; and improve their interactions with others in society. This course will help students understand functional leadership, learn to think like leaders and develop skills and competencies in leadership and mentoring roles. Students will also be encouraged to develop their own style of leadership, recognize and capitalize on existing strengths as well as developing key competencies critical to positive and effective leadership. These include self-discipline, positive thinking, confronting disappointment, criticism, and negative peer pressure, and perseverance. Essentially, this course offers rigorous theoretical knowledge on the psychology of leadership, and learning life skills and competencies so that students have essential tools to live better in society.

#### PPE 3500: Political Economy

This course examines International Political Economy (IPE), a field developed from a combination of International Relations, Comparative Politics, and Economics. As politics is often described as “who gets what, when, and why,” IPE studies the “winners” and “losers” in the global economy and within states as a result of international commerce and global competition. In addition, it examines why international cooperation, and its development is an important theoretical component in IPE. We will evaluate how international commerce impacts our daily lives, from consumption to occupation. Some core questions we will examine include what is the primary force behind the liberalization of international financial capital, and what impact does this shift have on states? What economic policies are best for development, and what role does foreign aid play? Why some countries are open to international trade and competition with some industries but not others? What are the differences between tariffs and non-tariff barriers to trade, and what are their impacts? How does globalization and migration affect the international economy?

#### PPE 3650: Theories and Practices of Development

This course is an introductory and mandatory course to complete the requirements for the Minor in Development Studies. Some of the central questions that will be addressed are: What is development? How do we achieve it? What has been done so far and how well have we done? The course will provide an overview of development theories and practices since the ‘Development Years’ (post WWII). The course will be looking at how development has been understood, defined and theorized and will be presenting the implications for development practices. It will also look at how the practices have contributed to shape the theories and understanding of development. The different theories and practices of development will be analyzed in their historical, economic and sociopolitical contexts to better grasp their influence on each other. The central importance of poverty and poverty reduction strategies will be

discussed, as well as the institutional landscape, from the role of various actors to the use of aid for development and poverty reduction.

#### PPE/ ASIA 3700 Cities, Planning and Development I

Urbanization is one of the dominant processes of the 21st century, increasing the demographic pressure in cities and leading to changes in socioeconomic, political and cultural patterns and structures. It has also been accompanied by the development of 'informal' settlements and economy and increased urban poverty. This rapid urbanization results in both challenges and opportunities and profoundly affects urban development and governance, from infrastructure and service delivery to economic growth and sociopolitical participation. Questions of social justice, empowerment, inclusion, mobility and freedoms are at the core of these challenges. The course will discuss how the questions of equity, efficiency and sustainability are framed in the discourses of development, planning and urban governance. It will analyze how decision-making and implementation is made in relation to development and urban management projects, programs and policies. It will present how planning reinforces or challenges power dynamics, structural inequalities and conditions of access. In order to do so, we will explore the links and influences of development and planning theories, paradigms and discourses on each other and on practices, actions and policy. In addition, in order to apply the analysis to practical examples, we will study and analyze the changing approaches to informal settlements and housing policies in developing countries since the 1950s.

Pre-requisite: Introduction to Development Studies (PPE2600/SOCA2600)

PPE / ASIA 3701: Gender and International Development After many decades to promote development around the world, why does so much poverty persist? What are some of the causes of inequality, and how do they relate to economic transformations, political reforms, and development interventions? Why do various development policies often have different consequences for men and women? The course provides ample opportunities to explore these issues. We begin with an introduction to the history of development itself, its underlying assumptions and its range of supporters and critics. We pose fundamental questions about how development has incorporated gender – and race, class, and other forms of difference. We consider various experiences with and meanings given to development by women and men in different contexts – as residents, aid workers, policy makers and government officials. In considering how development projects and policies are experienced in everyday life in rural and urban areas, the course asks: What are the underlying political, economic, social, and gender dynamics that make “development” an on-going problem worldwide?

#### PPE 3702: Globalization and Development

The global economy is undergoing rapid transformation. The changing dynamics of cross-border finance, trade and labor are fundamentally affecting how 'developed' and 'developing' countries relate to each other. This multidisciplinary course provides students with an important introduction to those most prominent features, changes, opportunities, and problems of global community. It critically reviews theories of 'globalization', assesses contemporary globalization processes, and how these influence the developing world in particular, and examines these influences through detailed analysis of contemporary manifestations of globalization. The course discusses the issues of sustainable economic development and reducing poverty through engaging private sectors and expansion of global business in the globalized world. The major questions that the course addresses are whether globalization is conducive to accelerated development, and – if so – to what kind of development, with which consequences and problems on all key levels: economy, sociology, ecology, politics, and culture.

#### PPE/ ASIA 4213: Social Entrepreneurship

Social entrepreneurship, social business and social innovation have been growing in popularity, importance, and recognition as innovative approaches to increase social and environmental benefits/output as part of the solution to deal with social/societal problems and challenges. This course will be three-fold. One part of the course will be about the origins, principles, and foundations of social entrepreneurship. In order to link theory and practice, a second dimension will be about analyzing and discussing case studies to understand better the process of how certain approaches, organizations or projects have tried to address/tackle social challenges and problems and the lessons that can be learned from these experiences. Finally, with the explicit objective of learning by doing, the third aspect of the course will involve the students in the process of identifying a problem, understand the problematic around it, and come up with an innovative idea to deal with it in a 'social entrepreneurship' manner. This is a culminating experience at AUW where the students confront their understanding of social and societal challenges to the practical challenge of action and implementation. Through this experience, the students will also get introduced to (social) business management and to the basic functions of the enterprise.

#### PPE 4300: International Leadership

This course will compare political leadership at the national and international level. Classical leadership theories will be canvassed, normative questions about leadership will be addressed, and the relationship between individual leaders and the wider societal and historical forces they encounter will feature as a dominant theme. Different leadership theories will be contrasted using contemporary examples, and the dark side of leadership will also traverse historical figures such as Hitler and Stalin. A particular aspect of this course will be to focus on the philosophical and psychological aspects of leadership, including the master skill of discernment underpinned by a leader's character. The course will also give special attention to a unique figure in world politics: the UN Secretary-General (SG). It will consider the factors that have shaped the role of the world's top diplomat by considering how the SGs of the past have exercised their functions and by comparing their leadership skills with those of national leaders. The course will also highlight the unique moral authority of the SG and will ask whether—and why—he or she carries more weight than national leaders.

#### PPE 4310: Multilateral Diplomacy: Politics Power and Persuasion

The forces of globalization and fragmentation at work in global politics since the end of the Cold War can no longer be managed through bilateral diplomatic relations. As a result, the post- Cold War international political environment is pushing multilateral diplomacy and international organizations to center stage. This course explores the unique facets of multilateral diplomacy and considers how the latter has adjusted to the post-Cold War political and economic climate. The course will introduce students to the history, theory and practice of diplomatic negotiations in key areas such as crisis diplomacy, international economic diplomacy, summit diplomacy and nongovernmental diplomacy.

#### PPE 4400: Politics of Bangladesh

Bangladesh serves as a rich and fascinating case study for debates within the field of comparative politics about the significance of state capacity and autonomy, the importance of institution building, the advantages and disadvantages of different electoral systems, the relationship between economic development and democratization, the rise of competitive authoritarianism, the impact of civil society on economic and political development, the sources of ethnic conflict, and role of religion in politics. Comparing Bangladesh to other cases such as Egypt, India, Malaysia, Pakistan, and Turkey will enable students to assess competing explanations about various political outcomes and strengthen their understanding of the comparative method. This writing-intensive course will give each student the

opportunity to develop a research paper that explores a particular theoretical and/or empirical puzzle of her interest about politics in Bangladesh. Prerequisite: Introduction to Comparative Politics or equivalent.

#### PPE 4702: Cities, Planning and Development II: Urban Challenges and Poverty

Countries in the Global South have been facing increased and accelerated levels of urbanization, often accompanied by the development of 'informal' settlements and economy and increased urban poverty. Urbanization produces a lot of challenges at different levels from infrastructure and service delivery to economic growth and opportunities. Mass poverty in cities of the Global South intensifies these challenges. Questions of participation, representation, governance, social justice, empowerment and freedoms are at the core of these challenges. Key dimensions like mobility, access, integration and exclusion have a tremendous impact on the opportunities and the constraints faced by some groups over others in achieving sustainable livelihood strategies and trying to improve their living conditions in being fully part of the world they live in. This course is a senior undergraduate seminar combined with a workshop approach. One central part of the course will be about presenting key concepts and analyzing case studies related to challenges in urban management and poverty in the Global South in an interdisciplinary manner. The other main part of the course will be a practical and more field-oriented approach to explore these challenges further.

Prerequisite: Only students who have taken 'Cities, Planning and Development I: Theories and Practices' PPE 3700 can register for this course.

#### PPE 3212: Ethics and Policy in Health Care Issues

In this course we examine moral and political problems that arise from healthcare-related issues. Is euthanasia sometimes morally justified? Should it be legal? Should abortion be illegal? How should society distribute scarce medical resources? Should there be a right to healthcare? Is using animals for medical experimentation justified? If cloning of humans was possible, would it be justified? How should society address the scarcity of human organs for transplantation? Should people be allowed to buy and sell organs? What are stem cells and why are their uses controversial? Should genetic intervention by parents or society be permitted? The course assessment will consist of participation, two essays, and a final exam.

#### PPE 3501: Principles of Critical Thinking

This course assumes that there are some core principles or tactics which we use, either tacitly or explicitly, in various instances of correct reasoning and critical thinking (irrespective of any specific domains). They are partly logic; but they will not be that technical. Nor are they all logic. We will, for example, learn how to catch the underlying argument of a given text or discourse, how to reduce bias and prejudice in making a conclusion/decision, how to proceed with an argumentative essay, and what sources to rely on. And in the logic part, we will learn about correct/incorrect reasoning, valid/invalid arguments, proof techniques, and fallacies.

#### PPE 4200: Logic

Logic deals with inferences – searches, guesses, predictions, or whatever – which are some kind of (mental) moves taking us from one set of truths (or claims, clues, or whatever) to another similar set. It tells us whether such a move is correct or incorrect. It is a skill as well as a subject to study. As a subject logic is pursued, and often required, in various disciplines, mainly in philosophy, mathematics, computer science, and linguistics. As a skill it is used in our various activities. We will be initiated into the subject through this course. We will become aware of the skill by seeing how various inferences are spelled out. We will first cover propositional logic (where we will see how simply from the truth of a number of sentences we can infer the truth of a new sentence; we will take the sentences as just truth-bearers and



ignore their internal structure), and later go for quantification (that is related with our inferences involving quantifiers like “some” and “all”; no longer can we ignore the internal structure of the relevant sentences then). We have to also absorb the basic notions like validity, models, and proofs.

#### PPE/ECON 2100: Principles of Microeconomics

This course gives you an introduction to microeconomics. We will be analyzing the fundamental concepts with an emphasis on applications of economic tools to modern day issues. This course will familiarize you with the determinants of the behavior of individuals and firms, the decisions they make given the set of choices available to them and how they respond to incentives. By studying the behavior and interaction of individual firms and consumers you will understand how industries and markets operate and evolve, why they differ from each other, and how they are affected by various public policies and global economic events.

#### PPE/ECON 2101: Principles of Macroeconomics

Economics is divided into two main branches: Microeconomics and Macroeconomics. While microeconomics discusses the behavior of relatively small entities such as consumers and firms, macroeconomics deals with the “big picture”. This course introduces students to the basic principles of macroeconomics. Hence, the course will examine macro variables such as output, unemployment, interest rates, and inflation which are important in gauging the state of the economy. We will also look at how these variables have behaved historically as well as uncover the causes underlying their behavior. The course will also consider economic fluctuations. Particular importance will be placed on understanding the business cycle — not only why the economy might enter a recession but what policy options the government and the Central bank have at their disposal to affect the business cycle and the impact of those macroeconomic policies in the short run and in the long run.

#### PPE/ECON 3100: Intermediate Microeconomics

This course is an advanced treatment of economics concepts that students have already been exposed to in the Principles of Microeconomics course. Hence, the course is somewhat abstract and reasonably technical. The course starts with individual preference, and analyzes, together with prices, how individual preferences determine individual demand and market demand. Then it analyzes the behavior of individual firms such as Profit Maximization, Cost Minimization and supply of goods and services. Different market structures such as Perfect Competition with a lot of buyers and sellers, Monopoly with a single seller and a lot of buyers are considered. It also deals with market structure such as Oligopoly with interdependent strategic behavior of rival firms. Hence, game theory that focuses on strategic behavior and helps analyze oligopolistic competition will also be introduced. Then, a general equilibrium framework under which an economy allocates scarce resources in an efficient way is analyzed. In addition, various cases of Market failures such as Externalities, Public Goods etc. are also examined.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics, and Calculus I.

#### PPE/ECON 3101: Intermediate Macroeconomics

This course is an advanced treatment of economics concepts that students have already been exposed to in the Principles of Microeconomics course. Hence, the course is somewhat abstract and reasonably technical. The course starts with individual preference, and analyzes, together with prices, how individual preferences determine individual demand and market demand. Then it analyzes the behavior of individual firms such as Profit Maximization, Cost Minimization and supply of goods and services. Different market structures such as Perfect Competition with a lot of buyers and sellers, Monopoly with a single seller and a lot of buyers are considered. It also deals with market structure such as Oligopoly with

interdependent strategic behavior of rival firms. Hence, game theory that focuses on strategic behavior and helps analyze oligopolistic competition will also be introduced. Then, a general equilibrium framework under which an economy allocates scarce resources in an efficient way is analyzed. In addition, various cases of Market failures such as Externalities, Public Goods etc. are also examined.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics, Principles of Macroeconomics, and Calculus I.

#### PPE/ECON 3102: Econometrics

Econometrics is a combination of Economic Theory, Statistics and Mathematics. However, econometrics is not merely an economic statistics, nor is it only an application of mathematics to economic theory; it is rather a combination of different aspects of quantitative approach to economics. Hence, in this course, both mathematical and statistical tools are employed to test the economic theories and estimating economic parameters/relations such as Multiplier, Marginal Propensity to Consume, Marginal Propensity to Invest, Price elasticity of Demand for a commodity, Elasticity of Substitution between different Factors of Production etc. using economic data. Testing economic theories and estimating economic parameters/relations are of utmost importance. They are particularly important in prescribing public policies that involve the well-being of millions of people, and are also important in business and other sectors. The techniques discussed in this course can be used in analyzing data of other social sciences such as Politics, Sociology, Anthropology, social work etc.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics, Principles of Macroeconomics, Probability and Statistics, and Calculus I.

PPE/ECON 3110: Microeconomics of Development

While some countries in the world grew at an unprecedented rate in the last fifty years, others were caught in abject poverty, severe income inequality and stagnation. Even those countries that have experienced economic growth, the economic changes were not always translated into proportional social changes and wellbeing. Again some poor countries made enormous strides in terms of achieving greater social changes in the presence of sluggish economic growth. This course begins by exploring the concepts of development and reviewing the relationship between poverty, inequality, economic growth and development. We will use economic principles to explore and analyze the core issues of economic development in that affects more than five billion people living in the developing world, with a particular emphasis on the decision making process of these poor households.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics

PPE/ECON 3112: Labor Economics

This course provides a discussion of the economics of the labor market. The course begins with an overview of the trends and institutional features that characterize the labor market. Particular attention is placed on the causes and consequences of rising female labor force participation rates, the growth of the service sector, and other labor market issues. After this introductory discussion, the focus of the course turns to a discussion of the theory of labor demand. In this section of the course, students examine the short-run and long-run determinants of labor demand, the determinants of the elasticity of labor demand, and the importance of demand. Students examine the tradeoff that occurs between the number of workers hired and the length of the work week. The next section of the course provides a discussion of the determinants of labor supply. This discussion begins with an examination of labor supply in a simple model in which workers face a choice between labor and leisure. This is followed by a discussion of the household production model in which individuals must choose to allocate time among market and various types of nonmarket activities. The effects of alternative types of welfare, unemployment compensation, and social security systems on labor supply are then examined. The concluding section of the course provides an examination of alternative sources of wage differentials. This portion of the course provides an examination of the economics of education, unions, discrimination, compensating wage differentials, and other determinants of wage differences.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics

PPE/ECON3115: Game Theory

This course is an introductory course into strategic decision making. The beginning of the course will focus on developing the techniques necessary to solve games. In the latter part of the course game theoretic analysis will be applied to a variety of topics, including, but not limited to, principal agent problems, auctions, and voting. The hope is that the student can see how the tools developed early in the course can be applied to a vast array of problems.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics

PPE/ECON 3116: Environmental Economics

This course will explore the following topics: The Evolution of Environmental Economics; The Visions of the Future; Externalities and Environmental Problems; Regulating the Market; The State of Environment

-- Country Experiences; Development, Poverty and Environment; and Environmental Protection and Marketing Strategies.

Prerequisite(s): Satisfactory completion of Principles of Microeconomics, Principles of Macroeconomics

#### PPE/ECON 3215: Principles of Marketing

Marketing is an important tool and a key factor for the success of business. In our daily life, we are exposed to excessive marketing messages and most of our purchasing decisions are strongly influenced by producers' and organizational marketing efforts. Marketing is everywhere as an inescapable feature of this contemporary world. This course "Principles of Marketing", provides an introduction to the essentials of marketing strategies for the analysis of consumers and competitors (key concepts, methods of analysis, strategies and tactics), which is very critical to manage profitable customer relationships in today's dynamic and interconnected environment. This course will familiarize the principles of marketing good and services, with the help of elements of marketing mix (product, pricing, promotion, and distribution strategies). This course will expand the knowledge of the students for many premeditated actions of top performing brands and will enhance the students' capability for decision making about the evaluation for real life business with insights into the relevant issues and tasks that the competitive firms face.

#### PPE/ECON 4101: Monetary Economics

Monetary Economics is one of the elective courses, designed for students studying Economics as major. The course develops a number of theoretical frameworks for the analysis of domestic economic perspective related to money, market for money, monetary transmission mechanisms, which provides a base for the understanding of classical and Keynesian approaches for monetary theory and their empirical evidence. Second part of the course focuses on the issues of monetary policy implementation in the closed and open economy contexts, like determinants of the price level, rate of inflation, exchange rate in different regimes.

Pre-requisites: Principles of Microeconomics and Principle of Macroeconomics

#### PPE/ECON 4102: Economics of Money, Banking and Financial Markets.

In a globalized world banking and Finance is getting more important now a days. The interaction between banking and financial markets in an economic activity is thus more important. The aim of this course is to provide the in depth knowledge of banking and finance to the undergraduate students. It will focus on different concepts and issues of monetary and fiscal policies, which enhance the financial flows in the economy. In addition, the importance of commercial banking, the role of central bank and capital market will be discussed in the course. After completion of this course the students will gather a good knowledge on banking and financial systems.

Pre-requisites: Principles of Microeconomics and Principle of Macroeconomics.

#### PPE 5000: Senior Thesis in Politics, Philosophy and Economics

An intensive research project undertaken in collaboration with a faculty member.

#### PPE 5001: Senior Thesis in Politics, Philosophy and Economics

Senior Thesis in PPE may be extended to 2 semesters with the permission of the supervising faculty member and the department.

## **Environmental Sciences**

### **ENVS 1000: Introduction to Environmental Science**

We will discuss the scope and importance of environmental science and its relationship with other branches of science. We will focus on several different aspects of the environment including: the principal components of the earth system – Atmosphere, Lithosphere, Hydrosphere, Biosphere and Pedosphere; the structure and function of ecosystems; aspects of biodiversity and its conservation; Renewable and non-renewable resources and their sustainable management; and topical issues e.g. carbon sequestration and global warming, pollution, natural disasters. This course does not have a lab but will include orientation tours to different industries and polluted areas and the preparation of a report on one of the visited areas.

### **ENVS 2001: Energy and Environment**

Energy is the life-blood of modern industrial society. Without adequate energy no nation can progress. Due to high consumption rates and market demands, energy exploration and production have increased around the world. Rapid exploration and production of energy is vital for economic growth, but sustainable growth will require a number of environmental considerations. Therefore, it is important to get a clear understanding of many complex issues involved in energy exploration, production, transportation, conversion, and consumption. The objective of this course is to address the current status and future prospects of renewable and nonrenewable energy sources. The course will include energy concepts & issues, various energy sources and technologies for energy generation, and energy conservation & management. It will also investigate the environmental impacts related to current energy exploration, production, transportation, and conversion technologies. Crucial environmental questions that are currently receiving much public attention, such as global warming, nuclear energy production, and technical options for reducing CO<sub>2</sub> emissions will be analyzed. Finally, energy conservation & management, and policy & economic factors affecting energy and the environment will be discussed to learn how to achieve sustainability in the energy sector. The objective of this course is to address the current status and future prospects of renewable and non renewable energy sources. It will also investigate the environmental impacts related to current energy exploration, production, transportations and conversion technologies. Crucial environmental questions that are currently receiving much public attention, such as global warming, nuclear energy conservation & management, and policy & economic factors affecting energy and the environment will be discussed to learn how to achieve sustainability in the energy sector.

### **ENVS 3000: Hydrology**

This course is designed to give comprehensive understanding of various hydrological processes involved in the hydrologic cycle including the land surface and subsurface processes, its linkages with the environment and the role of watershed and geological characteristics in surface and subsurface water dynamics. The course also focuses on how these hydrological and hydro-geological processes are measured and quantified in laboratory and field. The course involves rigorous mathematical analysis of water balance, various components of hydrologic cycle, hydrological measurements, flood, statistical hydrology and groundwater hydraulics describing well flow in steady and transient cases and how they are influenced by human activities, natural processes and interventions. To illustrate and impart the working skills, a number of practical classes consisting of laboratory and field with case studies will be held. The course will enable students to understand the science behind the occurrence and movement of atmospheric, surface and subsurface water, and to obtain the knowledge of estimation, simulation and forecasting hydrological events, consequences of human interactions and their impact on society,

environment and economic development. It will also help students to acquire, equip and strength the skill and competence to critically investigate and analyze the hydrological problems and water needs of society and environment which will help in evolving water policies, water management plans, strategic measures to combat hydrological disasters and engineering hydrologic plans and designs.

Prerequisite(s): Satisfactory completion of Calculus I and Physics I

ENVS/CSCI 3001: Numerical Analysis and Computing

Concept of Numerical computation: - Computer Arithmetic: Floating-point representation of numbers, arithmetic operations with normalized floating-point numbers and their consequences, significant figures. Error in number representation-inherent error, truncation, absolute, relative, percentage and round-off error. Solution of Nonlinear (Transcendental & Polynomial) Equations: - Iterative Methods: Bisection, False position, Newton-Raphson method. Iteration method, discussion of convergence, Barstow's method. Solving Sets of Linear Equations: - Solution of Simultaneous Linear Equations: Gauss-Elimination methods, pivoting, Ill-conditioned equations, refinement of solution. Jacobi Iterative method, Gauss-Serial iterative method, Polynomial interpolation & Approximation: - Polynomial interpolation: Newton, LaGrange's, Difference tables, Approximation of functions by Taylor Series. Chebyshev polynomial: First kind, Second kind and their relations, Orthogonal properties. Numerical Differentiation and integration: - Differentiation formulae based on polynomial fit, pitfalls in differentiation, Trapezoidal & Simpson Rules, Gaussian Quadrature. Solving Ordinary Differential Equations: - Euler method, Euler modified method, Taylor-series method, Runge-Kutta methods, Predictor-Corrector methods.

ENVS/ BIOL 3003: Ecology (with Lab)

In this course we will study the relationships among living organisms and their physical environment, population growth and regulation, interspecific interactions, community and ecosystem structure and function, and biogeography. Students should improve their ecological literacy by learning the basic facts, principles and concepts of the field of ecology, improve scientific literacy by learning how ecologists construct knowledge and improve their analytical and writing skills through analysis and interpretation of ecological data.

Prerequisite(s): Satisfactory completion of, or concurrent enrollment in, Biology II

ENVS 3004: Geology

This course involves the study of important physical characteristics of rocks and minerals, focusing on common igneous, sedimentary and metamorphic rocks. After an introduction to general geology, students will study petrology, mineralogy, structural geology and paleontology. Consideration of geological resources, the supply, uses and conservation of those resources in the environment including aquifers.

ENVS 3005: Environment Chemistry & Toxicology (with Lab)

Environmental chemistry includes atmospheric, aquatic and soil chemistry. This course is designed to provide the understanding of how the uncontaminated environment works, which chemicals in what concentrations are present naturally and with what effects, and how the chemistry of environment is sensitive to anthropogenic and natural activities. Without this it would be impossible to accurately study the effects humans have on the environment through the release of chemicals. It includes natural chemical cycles in the geosphere, hydrosphere and atmosphere. This course addresses the sources, fate and transport of chemicals in the environment and their environmental partitioning and transport, degradation and deposition including greenhouse gas emissions and carbon sequestration. The course will enable students to elucidate and understand specific chemicals, their effects and significance, and predictions of fate. The course also focuses on how chemicals in the environment affect on wildlife and human health. Precisely, toxicology is the study of effects of toxic substances on living systems. These

toxic substances can either be organic or inorganic, synthetic or natural materials. Environmental toxicology further extends to aspects of chemical transport, fate, persistence and biological accumulation of toxic substances and their effects at the population and community levels. The analytical methods to measure chemicals are also an important part of this course.

Prerequisite(s): Satisfactory completion of General Chemistry II

#### ENVS 3006: Remote sensing and GIS

Introduction to Remote Sensing and GIS, Historical development of remote sensing, Remote sensing components, Data collection and transmission, Sensors and satellite imageries, Electromagnetic energy and its interactions with earth's surface and environment, Wavebands, Radiometric quantities, Photogrammetry and aerial photography, Vertical and tilted photographs, Fly view, Aerial mosaics, Satellite data acquisition for earth's environment, natural resources management and weather forecast, GIS concepts, Spatial relationships, Topology, Vector and raster data structures and algorithms, Spatial interpolation, Spatial analysis, DEM, TIN, Spatial statistics, Case studies dealing with environmental monitoring, water resources, snow and glaciers, agriculture, and coastal and urban planning, Integrated use of remote sensing & GIS.

#### ENVS 3008: Water Management

Water resources and their management are important factors in the development of society. This course provides an understanding to water resources, their development, management challenges and the complex factors that contribute to them. Important aspects of addressing water related issues will be explored, including conceptual frameworks like Integrated Water Resource Management (IWRM), integrated watershed management and economics and gender issues in water management. Issues related to protection of water and watersheds are important for any student, especially for those who are interested in any aspect of environmental or resource management. Therefore, topics will be biased towards their relations to and interactions with environmental issues. To keep with AUW's interdisciplinary approach, this course will intersect physical and social sciences in the investigation of current water resource issues that are relevant locally, regionally and internationally.

#### ENVS 3200: Coastal Development

This course provides an introduction to coastal development and covers salient features of Bangladesh coast. Emphasis is placed upon understanding factors that affect coastal environment, their effects & significance and restoration of coastal environment in a sustainable way. Relevant topics such as mangrove, salinity, coastal erosion, climate change effects, coastal planning and management are introduced. Methodologies for assessing coastal risk and mitigation planning are also discussed.

#### ENVS 4001: Environmental Hydraulics

This course is designed to provide a fundamental understanding of the phenomena and processes that govern the water flow in the environment. Students are introduced to all relevant physical properties and fundamental laws governing the behavior of fluids in surface water. Emphasis is also placed upon understanding the processes of transport and spreading of pollutant in water flows including advective, diffusive and dispersive processes.

Prerequisite(s): Satisfactory completion of Calculus I and Physics I.

ENVS 4002: Environmental Microbiology (with Lab) Microorganisms are minute living beings which are too small to see by the naked eye. Individual organisms can only be seen with the help of microscope. These organisms are associated with many inconveniences, diseases, and infections such as AIDS, cholera,

typhoid, pimples, and food poisoning. However, some of these microorganisms have vital contributions to our environment wellbeing. The goal of this course is to study the fundamental concepts of Microbiology. It begins by examining the various microorganisms, such as bacteria, viruses, parasites, fungi, planktons. Additionally, the importance of microorganisms in public health, disease, the environment, and industry will be explored. The course includes understanding of various microbes such as bacteria, fungi, algae, protozoa, arthropods, etc., microbial growth, processes involved such as metabolism, catabolism, etc., microbial genetics and viruses, role of microbes in health and diseases and microbial applications in addressing varieties of environmental problems. The course will include soil microbiology that will cover basic concepts and theories on microbial occurrence, distribution, and activity in soil environment. This course consists of comprehensive knowledge on fundamental microbial functions and real-world issues and problems in relation to agricultural production and environmental quality. This course is outlined in such a way that it will be suitable for pre-med, biological science, environmental science, and engineering students.

Prerequisite(s): Successful completion of General Biology I and II, and General Chemistry I and II, at the discretion of the instructor.

#### ENVS 4003: Waste Management

The main goal of this course is to enlighten the essential principles involved in the management of waste in a manner that meets public health and environmental concerns. Waste management includes production, transport, handling, treatment and disposal of wastes (solid and liquid). During the course tenure, the source, composition and properties of waste will be discussed. Advanced principles related to the separation, processing, and transformation technologies of waste will be discussed also. The reuse of recovered materials, are some of the important topics of this course.

#### ENVS 4004: Global Climate Change

Global Climate Change is an introductory course on climate and climate change to provide a thorough understanding of what causes change in the earth's climate. This course examines the global climate system and main process controlling climate. The past, present, and future changes to temperature, weather patterns, and climatic conditions by natural and man-made factors will also be discussed. Potential effects and major environmental concerns due to climate change in different regions from Asia, Africa, North America and elsewhere will be examined. Ecological effects and human dimensions of climate change. Finally, policies, politics, adaptation and mitigation options that could reduce the impact of climate change will be discussed.

#### ENVS 4005: Natural Disasters: Assessment and Management Tools

This course provides an introduction to natural disasters and covers basic principles of natural disaster assessment and management. Students will be introduced to the causes and characteristics of different kinds of natural hazards such as earthquakes, flooding, and cyclones. Assessment methodologies for hazard and risk in urban areas are introduced and disaster mitigation planning methods are discussed. Geographic Information Tool will be used to present the results of assessment. Therefore in this course Arc-GIS will be introduced.

#### ENVS 5000: Senior Thesis in Environmental Science I

An intensive research project undertaken in collaboration with a faculty member. This research project allows students to have valuable and direct experience in the field of environmental sciences. The student will be expected to write a short proposal, conduct a literature search, design and conduct some



independent research (laboratory, field, computational, or library), and present the results in oral and written (thesis) form.

#### ENVS 5001: Senior Thesis in Environmental Science II

Senior Thesis in Environmental Science may be extended to 2 semesters with the permission of the supervising faculty member and the department.

#### ENVS 5002: Senior Seminar in Environmental Science:

Senior seminar course is for final year student of Environmental Sciences program. This course allows students to have valuable and direct experience in the field of environmental sciences especially in soil, water, climate change and wastes. The students will be expected to write a short proposal, conduct a literature search, design some independent/group research, submit research report (thesis) and present the outcome in oral form.

### **Public Health Studies**

#### PHST 1000: Introduction to Public Health

This course promises to take you on a journey through the science and the art of public health issues, concepts and practice by examining the philosophy, purpose, functions, organization, tools, activities and results of public health. Case studies will enable you to apply your knowledge to real-world local and international public health problems in order to understand how public health strategies contribute to population health. After the course you will possess an overview of this field to help you think about and explore how you can contribute to public health's mission for your community, nation and the world, either through a public health career or as a knowledgeable, engaged member of society.

#### PHST 2001: Nutrition for Health

This course is for students interested in an overview of nutrition's contributions to our personal health and ultimately the development of our countries. There is incontrovertible evidence that a healthy diet throughout life plays a key beneficial role in determining optimal growth, development, and health in children, and a healthy, productive life for adults, with poor nutrition having adverse consequences. This course promises to take you on a journey through what we know about the physiological requirements and functions of the nutrients in food that determine our health and disease. Topics include the roles of the nutrients in growth, health maintenance and disease prevention throughout life; nutrients' dietary sources; intake recommendations as well as choosing a diet for a healthier planet. After the course you will be empowered to apply the logic of science to manage not only your own and your family's nutritional environment, but also to move toward a career contributing to the design of effective strategies to healthier nutrition for yourself, your family, community, nation and world.

#### PHST/BIOL 3005: Principles of Biostatistics

This is an introductory course of biostatistics that will acquaint the students with the basic concepts of biostatistics and its appropriate uses and common misuses in public health. The course will involve practice in the application of statistical procedures along with introduction to appropriate statistical software. With the completion of the course the students are expected to have a basic understanding of biostatistical approaches in public health, as well as the ability to perform basic biostatistical analyses.

#### PHST 3500: Introduction to Epidemiology

This course will introduce students to basic principles and concepts of epidemiology. The course is designed to provide an overall understanding of descriptive epidemiology, study design, and methodological concerns in epidemiological studies. The format includes lectures, case studies, class discussion, and class exercises. The overarching goal of this course is to give students an understanding of the fundamentals of epidemiology particularly relevant in describing the pattern of disease in population and developing research design to investigate disease etiology, as well as the ability to think critically about epidemiological studies. Moreover, it is important for students to understand how this information is applied to real-world scenarios. At the end of the course the students are expected to have the basic understanding regarding the usefulness of epidemiological measures and methods in public health.

Prerequisite(s): Concurrent enrollment in Principles of BIOL 1004: Biostatistics

#### PHST 4000: Research Methods in Epidemiology

This is an intermediate/advanced level course that focuses on extending the student's knowledge of epidemiological methods beyond what they have learned in PHST3500. The course will familiarize the students with advanced concepts of study design, ascertainment of study subjects, questionnaire development, various methodological issues in data analysis and interpret including bias, measurement error, confounding and effect modification. Selected epidemiological studies including case-control, cohort, environmental and occupation study designs will be covered to highlight study design, exposure assessment, data analysis and interpretation.

Prerequisite(s): Introduction to Epidemiology

#### PHST 4001: Data Analysis

The data analysis course is an intermediate level course to familiarize the students with the theoretical concepts of multivariate data analysis and develop the skills to analyze complex data with the use of statistical software like SAS/SPSS. This course builds on prior knowledge on basic biostatistics (BIOL1004 or similar) and extends the student's knowledge beyond univariate analysis. The students are expected to learn the theoretical concepts of ANOVA, multivariate linear, regression, logistic regression and meta-analysis, analyze data applying those concepts, and prepare reports.

Prerequisite(s): Principles of biostatistics.

PHST 4005: Maternal and Child Health Maternal and child health are two areas of public health's unfinished business for improving the health of our most vulnerable populations across the globe today, particularly in nations where resources are scarce. Two of the 10 Millennium Development Goals aim specifically to improve maternal and child health, and several others, such as gender equality and HIV/AIDS, are critical aspects of Maternal and Child Health. In this upper division course, students will discover the trends, deep roots, multifaceted forces, issues and methods of today's maternal and child health enterprise. Students will be presented with real-life practical, ethical and theoretical challenges that will develop critical and analytical thinking skills while providing practice models that they can use in their present and future thinking and work so that they will be able to ask the right questions and advocate for, point to and deliver much needed effective, perhaps innovative and evidence-based solutions.

#### BIOL 4101: AbbVie Lectures: Scientific Research with Applications in Medicine and Public Health

Abbott scientists will present practical applications of their scientific research in pharmacology, medical science and public health. Topics include drug discovery and development, regulation of the drug industry,

and control of disease; the topics complement material studied in the course Human Anatomy and Physiology. Students will be assigned papers to read before a weekly teleconference, during which the research process and outcome will be discussed with the leading scientist. This is a 1-credit course, and assessment will be based on participation in group discussions.

Prerequisite(s): Concurrent enrollment in Human Anatomy and Physiology is required.

#### PHST 5000: Senior Thesis/Seminar I Public Health

This required course is the first semester of a one-year public health research project under the supervision of one or two faculty members. Research work may commence as early as during the summer immediately preceding the student's final year of attendance and continue through the student's final semester. Students will survey the relevant literature, determine a research question, collect their own data or identify an appropriate data set, manage and analyze the data as appropriate, and interpret the findings. Students will meet periodically with the supervisor(s) to discuss their progress and review the work. These discussions will culminate in a 30-minute research seminar presented at the end of the first semester.

#### PHST 5001: Senior Thesis/Seminar II Public Health

This required course, to be taken in the student's final semester, is a continuation of Senior Thesis I. During this term, the student will, using the public health research project undertaken in the first semester and the feedback from the seminar presented at the end of the term, produce a comprehensive written thesis which will be submitted for assessment at the end of the student's final term of attendance. Throughout the second term, the student will again meet periodically with her supervisor(s) to guide the thesis preparation.

### **Additional Courses**

#### CHEM 1100: Chemistry I (with Lab)

Chemistry I is the first semester of a two-semester series that will cover general, inorganic chemistry topics and prepare you for further studies in scientific majors. I will also emphasize green chemistry theory and highlight chemistry in everyday life and society. This course will consist of lectures, laboratory exercises and a weekly discussion/problem solving session. We will cover topics such as the mole, stoichiometry, the periodic table, various types of chemical reactions, phases of matter, intermolecular forces and bonding theory.

#### CHEM 1101: Chemistry II (with Lab)

Chemistry II is the continuation of Chemistry I that will cover physical chemistry topics and will help you to prepare yourself for the scientific majors. Students who have successfully completed Chemistry I can only take this course. Similar to Chemistry I, this course will also have lectures, laboratory and a weekly discussion/ problem session. This course will cover topics such as thermochemistry, chemical kinetics, chemical equilibrium, acids-bases, solubility, entropy and free energy, electrochemistry and nuclear chemistry. This is a course that requires hard working, continual studying, homework and assignments in order to keep up with the material for successful completion.

Prerequisite(s): Satisfactory completion of Chemistry I

#### CHEM 2000: Organic Chemistry (with Lab)

The course presents fundamental facts about the chemical properties of organic compounds and is meant to be an introduction to organic chemistry for students who intend to pursue a career in science. Students who have successfully completed Chemistry I and II can only take this course. This course consists of lectures, laboratory experiments and a weekly discussion/ reviewing session. It covers topics such as Lewis structures, bonding, hybridization, acids-bases, stereochemistry, and different type of organic reactions mechanism such as electrophilic addition, substitution reactions and nucleophilic addition, substitution reactions. This is a course that requires hard working, continual studying, homework and assignments in order to keep up with the material for successful completion.

Prerequisite(s): Satisfactory completion of Chemistry I and II

#### MATH 3000: Differential Equations

Most "real life" systems that are described mathematically, be they physical, biological, financial or economic, are described by means of differential equations. Our ability to predict the way in which these systems evolve or behave is determined by our ability to model these systems and find solutions of the equations explicitly or approximately. Topics covered are: definition and constructions of ordinary differential equations (ODEs) with classification; techniques of solving ordinary differential equations(ODEs): first order, first degree, and higher degree equations; Further techniques: Method of variation of parameters, Method of undetermined co-efficient; Higher order linear differential equations; Partial Differential Equation: Definition of Partial differential equations (PDEs), Construction of PDEs, Geometrical meaning of PDEs and their solutions, Classification of PDEs. Techniques of solving PDEs.

Pre-Requisites: Satisfactory completion of Calculus I and II.

#### MATH 3001: Linear Algebra

Linear algebra is a branch of mathematics that studies systems of linear equations and the properties of matrices. The concepts of linear algebra are extremely useful in economics and social sciences, natural sciences, and engineering. We will cover the topics including Matrices; determinants; Systems of Linear Equations; Vector spaces and linear transformations; Eigen values, Eigenvectors and diagonalization; Inner product spaces, Orthogonality. Numerous applications of linear algebra in different fields will be discussed in this course.

Prerequisite(s): Satisfactory completion of Calculus I

#### MATH 3005: Numerical Analysis and Computing

Concept of Numerical computation: - Computer Arithmetic: Floating-point representation of numbers, arithmetic operations with normalized floating-point numbers and their consequences, significant figures. Error in number representation-inherent error, truncation, absolute, relative, percentage and round-off error. Solution of Nonlinear (Transcendental & Polynomial) Equations: - Iterative Methods: Bisection, False position, Newton-Rap son method. Iteration method, discussion of convergence, Barstow's method. Solving Sets of Linear Equations: - Solution of Simultaneous Linear Equations: Gauss-Elimination methods, pivoting, Ill-conditioned equations, refinement of solution. Jacobi Iterative method, Gauss-Serial iterative method, Polynomial interpolation & Approximation: - Polynomial interpolation: Newton, LaGrange's, Difference tables, Approximation of functions by Taylor Series. Chebyshev polynomial: First kind, Second kind and their relations, orthogonal properties. Numerical Differentiation and integration: - Differentiation formulae based on polynomial fit, pitfalls in differentiation, Trapezoidal & Simpson Rules, Gaussian Quadrature. Solving Ordinary Differential Equations: - Euler method, Euler modified method, Taylor-series method, Runge-Kutta methods, Predictor-Corrector methods.

#### MATH 3006: Discrete Mathematics

Discrete Mathematics will cover the following concepts: Logic and its applications: Propositional Logic, Predicates & Quantifiers, Rules of inference, Methods of proofs, Normal forms, Proving Programs Correct; Sets, Relations and Functions: Sets, Set operations, Relations & their properties, Functions, Sequences and summations, Ordered Sets and Lattices; Graph Theory: - Representing relations, Graphs & graph models, Euler & Hamilton path, Trees; Induction and recursion: Mathematical induction, Recursive definitions & Structural induction; Combinatorics: Basics of counting, Pigeonhole principle, Permutations and Combinations, Binomial coefficients; Recurrence Relations and Generating Functions; Algebras: Groups, Semi-groups, Rings, and Fields.

#### MATH 3100: Operations Research

Operations Research is the study of techniques for finding an optimal value of some objective function subject to a set of constraints. Problems of this nature arise as models of decision processes in many areas of business, engineering and other fields. This course will cover the essential mathematical foundations of various mathematical programming problems and solution methods. In particular, the topics will include elements of convex analysis, linear programming (LP) and the simplex method, duality and sensitivity analysis, transportation problem, Integer programming. In addition we will look at applications of optimization techniques in areas such as production/distribution, scheduling, routing, budgeting and resource allocation. We will consider LP as the main part of the course.

#### PHYS 1100: Physics I

Physics I will cover the following concepts of dynamics: Newton's law of motion; motion and force; work, energy, and power; linear motion of particle; two dimensional motion; waves and oscillation; momentum of particles; conservation of energy; and application centered with these in the physical world; as well as these concepts of thermodynamics: heat and work; applications of the 1st and 2nd law of thermodynamics; the zeroth law of thermodynamics; kinetics theory of gases; specific heat of gases; equi-partition of energy; mean free path; Maxwell's distribution; reversible and irreversible process, Carnot's theorem and cycle; and thermodynamic function.

Prerequisite(s): Satisfactory completion of Calculus I.

#### PHYS 1101: Physics II

Physics II is a continuation of Physics I and will cover electricity, magnetism and electromagnetic fields and forces. Electromagnetic forces quite literally dominate our everyday experience. The very tiny charge particle does not fall through the floor to the center of the earth rather it is floating on electrostatic force fields, because electromagnetic forces are so enormously strong almost  $10^{40}$  times stronger than gravity. In our everyday experience, matter is electrically neutral and our direct experience with electromagnetic phenomena is disguised by many subtleties associated with that neutrality. This is very unlike our direct experience with gravitational forces, which is straightforward and unambiguous.

Prerequisite(s): Satisfactory completion of Physics I.

## Listings for the Minors

### Asian Studies

#### ASIA 2103 Creative Writing: Introduction to Fiction

In this course we will study the basics of writing fiction: plot, character, setting, point of view, and theme. We will read a range of fiction and study it for its craft, rather than for its value as literature. The course will be managed as a workshop focusing on the work of students, who will each produce multiple drafts of at least 3 short stories. All drafts will be read by the entire class and serve as our discussion topics during our workshops. In addition to studying and producing fiction in the western/international tradition, students in this course will study various forms of creative writing from East, Southeast and South Asia

#### ASIA 3002: Globalization and Culture: An Asian Perspective

This course takes an interdisciplinary approach to Globalization and Culture. Globalization and Culture are two terms which are difficult to explain on their own, they become very complex, yet they also become exceptionally relevant to our daily lives when we explore them together. Therefore, this class will explore the cultural dimensions of globalization in our everyday lives, with a particular focus on Asia. We will look at different actors on the global stage of Culture, including, but not limited to the tourist, the migrant worker, the film actor, the signer, the politician, the art critic, to name only a few. We will explore how global flows transform cultural experiences at the local level and therefore how they affect local identities.

#### ASIA 3003: Gender Identities in South Asian Film

In this upper-level course, we will engage with a wide variety of films and documentaries by film makers from South Asian countries (Bangladesh, India, Nepal, Pakistan). We will use these films and documentaries to explore and contextualize representations of gender-related questions. We will pay particular attention to how the films and documentaries are embedded in contemporary discourses about gender and sexuality as well as to how issues of gender, sexuality, 'race,' and class intersect. In our exploration of the films and their topics, we will also consult theoretical articles that develop a framework of South Asian film as a contemporary medium that can inspire and bring about social changes in societies with regards to gender. Students should be prepared to participate actively in discussions, give a short presentation in class, and write several papers. The movies will be screened during weekly movie

#### ASIA 3004: Gender and Sexuality in Asia

This course examines gender, sex and sexuality in contemporary 'Asia'. Our fundamental premise is that social life is gendered and gender inequalities stem from social constructions of gender rather than biology. In exploring how gender is socially constructed, represented and enacted, we challenge notions of gender as stable, dichotomous and innate, or something internalized through socialization. Ideas about femininity and masculinity shift in different contexts and are constantly redefined. We consider the ways people perform or 'do gender' in everyday interactions and the diversity of femininities and masculinities created out of those interactions. Drawing on a range of feminist scholarship and other literature, case studies, reports, NGO material, and media, we explore gender relations in the region through a transnational perspective and the lens of intersectionality—how gender as a system of power intersects with other power relations, such as class, race, ethnicity, sexuality, religion, nationality and age. The course addresses social relations of gender (material practices and institutions), and gender as discourse and the politics of representation (for example, social constructions of masculinities and femininities that sustain gender inequality). Topics include gender, sexuality and power; Orientalism; sexualities in 'Asia'; feminization of labor migration; transnational marriage migration; gender, sexuality, imperialism and

nationalism; gendered violence; and activism around gender and sexuality. Our framework for examining these issues is the complex interaction between globalization and localized political, economic and cultural factors.

#### ASIA 3005: South Asian Literature

Significant writers from the 19th and 20th centuries will be studied to establish the Asian literary tradition in the developing world. The course will explore the continuity and change in society and culture depicted in the works. The course will also focus on three major literary theories, Orientalism, Subaltern Studies and Gender and Sexuality. Asian Scholars have been critiqued for succumbing to the image created by the West—Orientalism. And we will trace how Asia writes back. We will also examine the texts where the gendered subaltern has been represented. Gender and Sexuality will be the third theory we will discuss through prescribed readings and see how gender and sexuality is not in fact a theory and/or practice imposed by the West.

#### ASIA 3008: Women, Gender and Globalization

This interdisciplinary course explores current issues and debates relating to gender and globalization. As with other progressive activists and thinkers, feminists are increasingly interested in the implications of global connections and inequalities. Feminist contributions to understanding globalization have gone beyond abstract entities, like governments or markets, focusing on concrete impacts on the everyday lives and experiences women-workers, on images of women and femininity, on the environment. In this course, we will examine globalization as it unfolds in a range of geographical contexts (with a focus on South and Southeast Asia), and from a variety of perspectives. We will explore a range of questions: What is globalization? What does a focus on “women” bring expose when studying globalization? What does a “gender perspective” bring to light? How do globalizing processes shape what it means to be a woman or man in different contexts? What are the gendered effects of these processes, and how do they intersect with categories like race and class? What challenges exist for those advocating women’s rights across borders? We begin by establishing working definitions of globalization and some of the primary ways in which gender (and other categories) relate to globalizing processes. We will explore the gendered effects of globalization across several key areas: international politics and war, economic globalization, domestic labor in a transnational perspective, sex and love, media and images, and local struggles and transnational alliances. In this interdisciplinary course, we will develop our “gender lens.” This lens provides will us with a useful tool for working across conventional borders to address certain complex problems or questions. We will use our gender lens to bring into focus the many, interconnected factors that shape women’s lives.

#### ASIA 3010: Asian Art History; Questions of modernity, postmodernity, and contemporaneity through Asian Art

In this class, we will investigate the concepts of modernity, postmodernity and contemporaneity using Art as a medium. Rather than to look at regional iconographic and stylistic Art Historical specificities, we will look at the transformative power of Asian art, starting with the modern era. We will investigate questions of modernity and contemporaneity in Asia and examine how they affect/ed the production and the reception of both traditional and ‘new’ Asian art forms. Modernity, contemporaneity, nationalism, traditionalism, globalization, localism, Diaspora and representation, are some of the key terms we will study in this class. We will investigate how contemporary Asian artists see themselves in the contemporary global art community. This class includes a Field Trip to Dhaka, where we will visit art galleries and artists’ studios.

#### ASIA 3011: Asian Art History: Pre-Modern To Modern Era.

This course is designed as an overview of historical Asian art from pre-history to the early modern era. The political, social, philosophical and religious principles underlying the architecture and the art, including, painting, sculpture and ritual of different geographical regions will be examined. Emphasis will be on learning to formulate ideas and develop writing skills adequate to Asian art history.

**ASIA 3013: Gender and Visual Culture in Asia (AS, FA, GS):**

Visual Culture investigates how meaning is visually produced, coded and received in different cultural regions, periods and contexts, such as public art, museums, advertisement, television, political posters, etc. We will examine how Asia, Women, and Asian Women in particular have been imagined and represented in the past and how they are still represented today. In this class students will develop their critical and analytical skills and understandings of Visual Culture in relation to Gender and what is commonly referred to as 'Asia'. Topics to be explored in this course include popular visual culture, the modern and contemporary art museums, the tourist industry, the music industry, and the political imagining.

**ASIA 3100 Directing and Producing for Theatre**

Students will be introduced to basic directorial skills including communication with actors, designers and technical crew and will utilize script analysis and staging techniques to direct and produce a theater event. Students will develop technical theater skills through familiarity with stage craft of lighting, set and costume design. Stage management and producing skills will be emphasized in all phases of the preproduction, rehearsal, performance process. The final production will be based on dramatic literature of Asia.

Similar to LCSA 1013, Acting, Voice and Movement.

**ASIA 3101: Cultural Commentary through Contemporary Writings**

A number of writers have emerged in the contemporary Asian literary scene contributing immensely to world literature. The contents of the course will display an interplay of literary traditions and diasporas that are widely cast. Influences as varied as the Mahabharata and Dickens will be evident while working with historical and cultural background elements that are important to fully understanding of the texts. By adopting Postmodern literary techniques, English contained in local cadences, and playing around with the boundaries of languages, we will also study how writers coax contemporary stories out of classic epics.

**ASIA 3102: Gender and Sexuality in Asian Religion**

This is an upper-division interdisciplinary Asian Studies course and will explore issues of gender and sexuality in Asian Religions. While covering the Asian religious traditions broadly, the course will focus primarily on issues of gender and sexuality in Hinduism, Buddhism, and Islam, and will approach each tradition according to the three following categories: 1. scripturally and textually; 2. culturally and historically; and 3. contemporary and critically. Thus, we will examine the depiction of men and women, gender roles, and sexual ethics by reading the primary scriptural texts of each religious tradition, such as the Vedas, Tripitika, and Qur'an, how these texts have been interpreted differently both historically and culturally, and contemporary challenges to gender norms and sexuality from feminist and other religious studies scholars. No prior knowledge of Asian religions or gender studies is required for this course, though an active, critical approach toward the readings, viewings, and class discussions is necessary.

**ASIA 3103: Education in Asia (WI):**

What is education? What is its purpose and impact? What processes and structures influence whether educational practices/institutions/policies are successful or not, what kind of impact it has? This course



starts with these questions and contextualizes these questions through case studies in Asia, as well as research in the field of sociology of education and knowledge. The course is an opportunity to debate and discuss the meaning, purpose of education and knowledge. The course is an opportunity to debate and discuss the meaning, purpose and politics of education, while at the same time becoming familiar with actual practices of education in Asia. This course is an invitation to think about how we can improve educational practices and institutions in our communities and the challenges that accompany these aspirations for change.

**ASIA / PPE 3201: Civil Society and Social Movements** What do we mean by civil society and why do we think it is important? What is the role of civil society in making a society stronger? What are the “uncivil” dimensions of civil society? In this course we will look at the dimensions of civic associations that can help to mediate conflict and build trust or exacerbate conflict and increase the separateness between communities. Conceptualizing social movements as an important kind of social action in the realm of civil society, we will then examine various cases of social movements in Asia to develop a better understanding of what is a social movement, how it is built and sustained, and what are its outcomes, at both local and global levels.

**ASIA / PPE 3203: Politics in South Asia**

This course provides an introduction to the politics of India, Pakistan, Bangladesh, Sri Lanka, and Nepal. The first part of the course constitutes a brief survey of the political histories of each country. The second part explores the following topics and invites comparison among the different countries: Caste, Class, and Ethnicity; Communalism, State Structures, and Civil Society; Political Movements, Insurrections, and Revolution; Local Structures of Power; Culture, Religion, and Gender; The Political Economy of Development; and Parties & Elections.

**ASIA 3205: Political Identities in ASIA**

How do identities become politicized? How are identities constructed to impact on power? Who controls the meaning of a given identity in society? How do we understand and analyze the “us” vs. “them” identity conflicts in our societies? This course will draw on theories from sociology, political science, anthropology, and economics to explore these questions from a comparative perspective in both Asia and elsewhere. We will utilize readings, projects, discussions, and films to delve not only into the politics of identity regarding nation, class, religion, and gender, but also lifestyles and differing visions of the good society.

**ASIA / PPE 3206: Political Identities**

How do identities become politicized? How are identities constructed to impact on power? Who controls the meaning of a given identity in society? How do we understand and analyze the “us” vs. “them” identity conflicts in our societies? This course will draw on theories from sociology, political science, anthropology, and economics to explore these questions from a comparative perspective in both Asia and elsewhere. We will utilize readings, projects, discussions, and films to delve not only into the politics of identity regarding nation, class, and gender, but also lifestyles and differing visions of the good society.

**ASIA 3210: Migration**

This course examines migration in the context of ‘Asian’ societies and diasporas through a gendered, intersectional, transnational, and human rights perspective. It is designed so that we critically reflect on how migration impacts on our own lives. Drawing on academic literature, case studies, reports, migrant advocacy networks, media, and other material, we explore the various ways migration and diasporas are gendered and how gender intersects with race, ethnicity, class, sexuality, religion, nationality, age, and so on, to shape migratory processes and experiences. The course addresses the social, economic, and

political relations of migration (material practices and institutions that motivate and sustain migration) as well as representation and identity (social constructions of masculinities and femininities, such as gendered, racist and classist ideologies that shape international demand for migrant female domestic workers). We bring a critical lens to the study of topics including labor migration and its feminization; forced migration – refugees and trafficking; transnational migration – transnational families and marriage migration; migration and human rights; gendered violence and social justice, migration, and development; transnational politics; and the relationship between migration and digital technologies. Our exploration of transnational intimacies in the form of marriage migration and so called ‘mail order brides’ will provide better understanding of how people engage in emotional and sexual intimacy cross-culturally. .

#### ASIA 3215: Women in Theater: A Comparative Study

In many countries across Asia, theater has been a public arena for entertainment. Rulers, monarchs and feudal lords have been entertained in public and private spaces by theater groups. Temples and streets have been seen as public stages where religious and social rituals and festivals have vied for attention of the public. These traditional spectacles gradually gave way to modern day performances and arbitrary articulations of theater as a masculine institution. In this course we will see what roles have been doled out to women, or how they have become agents in bringing about change in the perceptions of theater as a form of entertainment for all and a voice for change, -a forum for feminist redefinitions. In the process of learning and redefining women’s roles in theater we will draw upon non-Asian theaters/texts and women’s roles in them. The comparative assessment will create a dialogue on the position of women in theater today across the multi-cultural landscape, and the analysis of theatrical spaces will reveal the changing conceptions of woman's position in the family and in society.

#### ASIA/PPE 3219: Asian Philosophies

This course is designed to provide both a historical understanding of the ancient philosophies of India, China, Hawaii and the Pacific Islands and a consideration of core ideas generated from these philosophies as evidenced in ancient and modern text, religious practices, and socio -political institutions. Students will use a comparative approach allowing for a thematic consideration of such questions as the purpose of the material world, the role of the mind, and how knowledge is defined in each philosophy.

#### ASIA 3301: East and West: A Comparative History

This course examines the history of the East and the West comparatively and prepares students to understand each of the societies in a comparative context. We will read extensively the classical works on historical trajectories of the East and the West. Students in this course will be familiarized with important historical and social theories and research methods. Some of the important questions we explore in this course include: why did the West succeed in industrialization by the early 19th century, but the East did not? How did the West rise in world history? How did different variables, such as geographical locations, natural resources, population, technology, social institutions, and mentality, etc. play a role in determining the divergent trajectories of the East and the West? This course is designed as a senior reading seminar and requires the students to prepare for the seminar and participate actively in the discussion. We mainly use scholarly books and articles. Occasionally we will use travelers’ logs, videos and movies in a classroom setting.

#### ASIA 3310: Asexuality in Contemporary Global Fiction

Asexuality, often defined as “a lack of sexual desire or attraction,” is currently in the process of being acknowledged as a sexual orientation. But what is so different or even radical about not wanting to have sex? In this upper-level class, we will examine the concept of asexuality and a variety of representations of asexuality in literature, film, and popular media. We will look at how characters who are identified by

others as asexual or self-identify as asexual are represented in fiction from all over the world. While our focus will be on Asia, we will also look at texts from the Americas, Africa, New Zealand, and Europe. Students should be prepared to participate actively in class, lead discussions, and write several papers to help them develop their academic writing skills.

This class is cross listed for the Asian Studies major and the Gender Studies minor.

#### ASIA 3403: Comparative Literatures

In this course, we will engage with a wide variety of texts by authors from Asian countries such as Bangladesh, Vietnam, Japan, India, Korea, China, Sri Lanka, Burma/Myanmar, Pakistan, and Thailand. We will use short stories, novels, speeches, letters, and films to explore and contextualize representations of gender-related questions, political controversies, social justice issues, and immigration policies. We will pay particular attention to how the texts might speak to one another with regard to these and other topics. In our exploration of the connections between the various texts and topics, we will also consult theoretical articles that develop a framework of 'comparative literature' as an interdisciplinary field that goes beyond national boundaries and similar approaches such as 'world literature' or 'transnational literature.'

#### ASIA 3404: Asian Dramatic Culture

The course will chart the development of Asian Drama, evoking myths and socio-cultural traditions, major trends in dramatic writings, and theatrical conventions, through representative works. The class will also analyze philosophical ideas and performance theories as they relate to a variety of imaginative forms. The second semester will be a comparative study of Asian and Western drama and the variety of other dramatic forms.

**ASIA 3406: Consumption Culture and Politics in Asia** This course explores how diverse cultural, economic, and social values are intertwined with consumption and spending practices. We will explore classic and contemporary theories about consumption and spending as well as diverse cases in Asian countries. Some of the topics we explore include fair trade movements, ethical spending, as well as the effect of advertisement.

#### ASIA 3407: Socially Engaged Buddhism

This course will explore traditional and contemporary Buddhist views on the relationship between Buddhist wisdom and social justice and will examine how the ideals of Buddhist leadership and social justice are practiced by contemporary Buddhists in Asia and across the globe. The first sections of the class will focus on an in-depth textual analysis of Buddhist doctrine and the ideas of leadership, justice, and morality in early Buddhism, and will analyze the nature of ethics, wisdom, and leadership in classical Buddhist texts. The latter sections of the course will examine contemporary movements of "Socially Engaged Buddhism," which emphasize the social and political nature of the historical Buddha's teachings and apply those teachings to issues of poverty, globalization, environmental destruction, war, and sex-trafficking. Along with studying traditional Buddhist texts, we will also read contemporary Buddhist thinkers such as Thich Nhat Hanh, Suu Kyi, the Dalai Lama, Ambedkar, Sulak Sivaraksa, Dhammanana, as well other American and Western Buddhist thinkers.

#### ASIA 3408: Qualitative Research Methods for Asian Studies

This course is appropriate for any student interested in developing their knowledge and skills in qualitative research methodology and the ethics of research. Although offered as a psychology elective, this course explores a range of approaches and practical techniques in the behavioral and social sciences that will

assist students in designing, conducting and writing-up their own qualitative research. We examine the roots of qualitative inquiry, and the role of psychological, sociological, and anthropological research. Ethical considerations inform every aspect of research involving humans and are, thus, a central concern in the course. Cultural and social awareness as well as understanding the role of 'self' in research are critical to the design and implementation of any ethical and rigorous research. These aspects will be discussed in detail in this course. Other key topics include qualitative research design, data collection, interpretation and analysis, bias and validity, ethical issues and the politics of research, including relationships with participants, and self-reflexivity. The course will focus on how to understand and study some key psychosocial issues including domestic violence, suicide, childhood, migration, refugeehood, and displacement. Class work will include lectures, discussion and seminars (some student led) and there will be an opportunity for a research study to be conducted during the semester. This research methodology course will equip students with practical skills of fieldwork and research that are important for work in the public sector, in the private sector and in the civil society sector. Research methodologies provide important transferable skills and behavioral and social science research methodologies are relevant in all disciplines working with human beings. In the modern world, the ability to critically evaluate information and the ability to produce new knowledge are central. This course will also help students to think through practical, scientific, psychosocial, and philosophical concerns in the process of doing research.

#### ASIA 3500: Religion & Violence in Asia

This course provides an overview to the major theories and problems of global justice. It will examine Classical and contemporary views of justice with an international focus and from a variety of Asian and Western perspectives and will deal with issues relating to human rights and nationalism, globalization, distributive justice and poverty, environmental destruction, and violence against women, children, and minorities. The beginning sections of the course will examine general theories of justice by thinkers such as Plato, Kant, J.S. Mill, the Buddha and Chuang Tzu, the remaining sections of the course will apply these theories to particular problems and issues in the modern world. Students in the course will learn to critically evaluate the ethical dimensions of global justice that underlie most contemporary debates in international politics and will have the opportunity to develop their own views and assessments of global justice.

#### ASIA 3505: Gender and Sexual Identities on Stage

The course examines the various stages and images of gender and sexual identities on the Asian stage. Using theories from gender studies we will explore the different processes and practices of how masculinity and various other sexual identities are (re)presented on stage as we move from historical evidence to popular culture. Through dramatic texts we will analyze, acts of gender, as well as practices of anxiety, anger, and violence, fear and intimacies of other sexual identities. Even while the course will be rooted in Asia, we will however draw on examples of global sexual identities through dramatic texts.

#### ASIA 3600: Beginning Mandarin I

Beginning Mandarin, I is the first in a series of four semester-long courses intended to help students communicate effectively using Mandarin Chinese. The course will introduce the fundamentals of the language to students without prior knowledge of Chinese with a strong focus on speaking and listening skills needed for common daily life interactions. In particular, students will learn how to have basic conversations with people they meet, talk about food, make purchases, and get around in China. The course will develop student mastery of pinyin pronunciation, basic grammar, and practical vocabulary. While learning activities will rely on pinyin, students will also be expected to learn to recognize and write

a small number of common Chinese characters. In addition, periodic cultural presentations and discussions will be held to increase students' familiarity with China and its people.

#### ASIA 3601: Beginning Mandarin II

This is the second in a series of six semester-long courses intended to help second language learners communicate effectively using Mandarin. This course will continue to strengthen your grasp of fundamentals such as pronunciation and grammar, while introducing vocabulary and structures necessary for engaging in increasingly complex social interactions. More specifically, the focus will be on the speaking and listening skills needed for common activities like shopping for clothes, ordering food in a Chinese restaurant, renting an apartment, asking for help and traveling. In addition, this semester will introduce you more formally to Chinese characters and will have a greater emphasis on recognizing and writing Chinese. This is necessary to insure a smooth transition to the Intermediate level of Chinese study. Finally, periodic cultural presentations and discussions will continue to be held to increase your familiarity with China and its people.

#### ASIA 3602: Intermediate Mandarin I

Intermediate Mandarin I is the third in a series of six semester-long courses teaching students how to communicate effectively using Mandarin Chinese. Students who enroll in this course should already have mastered the basic pronunciation, grammar, and vocabulary needed for common daily life interactions. This course will introduce vocabulary and grammar suitable for increasingly complex social interactions, such as talking about health problems and taking part in job interviews. In addition to conversational dialogs, in class activities will increasingly expect students to participate in discussions, tell stories and jokes, and present their own opinions and ideas. Outside of class, students will be responsible for looking up information in Chinese in order to write essays and give class presentations, reading level-appropriate news articles, short stories and novels, and meeting with the instructor to discuss their readings. Furthermore, this course will expect students to make extensive use of 汉字 (Chinese characters) for reading and writing, rather than relying on pinyin. A realistic goal is that students will be able to write about 500 Chinese characters by the end of the course.

#### ASIA 3603: Intermediate Mandarin II

Intermediate Mandarin II is the fourth in a series of six semester-long courses intended to help second language learners communicate effectively using Mandarin Chinese. To enroll in this course, you must have already mastered the pronunciation, grammar, and vocabulary needed for daily social interactions. You should also feel confident to read and write most common 汉字. This course will expand your knowledge of vocabulary and grammar suitable for more complex interactions, such as opening a bank account, participating in a wedding, and handling emergencies. In class activities will increasingly expect you to take part in discussions, retell stories and jokes, explore Chinese culture such as Spring Festival and Beijing Opera, and present your own opinions and ideas. In terms of writing, you will need to continue your daily writing practice in order to further develop your ability to communicate freely about your own life and experiences. You will also be asked to read a greater variety of texts with more in-depth stories, and then express your own reaction to the stories in both written and oral form.

#### ASIA 3604: Advanced Mandarin

In Advanced Mandarin I students will develop their ability to interact socially and occupationally in Chinese. They will increasingly be able to tailor their speech and writing to match a given context and will be able to participate in increasingly formal and extended conversations. The course will consist of readings and discussions related to current topics including population, housing, education, university

graduates' employment opportunities, marriage, and women's status in the family. In speaking situations, students will be asked to practice expressing complete arguments without the benefit of advance preparation. The length and complexity of reading assignments will approach the level read by the general public in China. Writing assignments will ask students to research topics in Chinese and incorporate what they find into their arguments.

#### ASIA / PPE 3701: Gender and International Development

After many decades to promote development around the world, why does so much poverty persist? What are some of the causes of inequality, and how do they relate to economic transformations, political reforms, and development interventions? Why do various development policies often have different consequences for men and women? The course provides ample opportunities to explore these issues. We begin with an introduction to the history of development itself, its underlying assumptions and its range of supporters and critics. We pose fundamental questions about how development has incorporated gender – and race, class, and other forms of difference. We consider various experiences with, and meanings given to development by women and men in different contexts – as residents, aid workers, policy makers and government officials. In considering how development projects and policies are experienced in everyday life in rural and urban areas, the course asks: What are the underlying political, economic, social, and gender dynamics that make “development” an on-going problem worldwide?

#### ASIA 3704: Issues of Social Justice in South Asian Films

In this course, we will engage with a wide variety of films and documentaries by film makers from South Asian countries (Bangladesh, India, Nepal, Pakistan, and Sri Lanka). We will use these films and documentaries to explore and contextualize representations of gender-related questions, sexuality, political controversies, immigration policies, disability, and HIV/AIDS. We will pay particular attention to how the films and documentaries are embedded in contemporary discourse about these and other issues of social justice. In our exploration of the films and their topics, we will also consult theoretical articles that develop a framework of South Asian film as a contemporary medium that can inspire and bring about social changes in societies. Students should be prepared to participate actively in discussions, give a short presentation in class, and write several papers. The movies will be screened during weekly movie nights which are considered part of this class and thus compulsory to attend for students taking this class.

#### ASIA 4000: South Asian Literature

Significant writers from the 19th and 20th centuries will be studied to establish the Asian literary tradition in the developing world. The course will explore the continuity and change in society and culture depicted in the works. The course will focus on three major literary theories, Orientalism, Subaltern Studies and Gender and Sexuality. Asian Scholars have been critiqued for succumbing to the image created by the West—Orientalism. And we will trace how Asia writes back. We will also examine the texts where the gendered subaltern has been represented. Gender and Sexuality will be the third theory we will discuss through prescribed readings and see how gender and sexuality is not in fact a theory and/or practice imposed by the West.

#### ASIA 4001: Literatures of the South Asian Diaspora

In this upper-level course, we will engage with a wide variety of texts by authors from the South Asian Diaspora. We will use short stories, novels, plays, and films to explore and contextualize representations of gender-related questions, political controversies, social justice issues, and immigration policies. We will pay particular attention to how the texts might speak to one another with regard to these and other topics. In our exploration of the connections between the various texts and topics, we will also consult theoretical articles that analyze the fictional texts critically and/or that reflect on the topics discussed in

the fictional texts. Students should be prepared to participate actively in discussions, give a short presentation in class, and write several papers.

#### ASIA 4100: Philosophy and Film (ASIA/PHIL)

This course will explore philosophical issues related to the study of film and will critically examine philosophical themes in films from across the globe. We will study classical philosophical texts and ideas in a comparative context, including Plato, Descartes, the Buddha, Nietzsche, Camus, and Confucius, and we will view films from various countries, including Korea, Tibet, Bhutan, Thailand, the U.S, and Europe. No prior knowledge of philosophy or film theory is required for this course, though an active, critical approach toward the readings, viewings, and class discussions is necessary.

#### ASIA 4105: South Asian Masculinities (AS/ GS)

The course will explore what it means to be a 'man' in the South Asian contemporary society. We will examine how both society and men actively construct multiple 'masculinities' in different socio- historical contexts and at different stages of their lives with different consequences for both men and women. The course will not only explore the social construction of masculinity and maleness but will also chart their functionality within the structures of class, caste, gender, ability and sexuality. The course will interrogate how the discourses of power influence, mobilize and put into practice the functions of cultural formation in Asia at the local and regional levels.

#### ASIA 4110: Contemporary South Asian Literatures in the Global Context (AS)

In this upper-level course, we will engage with a wide variety of texts by authors from South Asian countries (Bangladesh, India, Pakistan, Sri Lanka, and Nepal). We will use short stories, novels, plays, and films to explore and contextualize representations of gender-related questions, nationalism, political controversies, and issues of social justice. In our exploration of the connections between the various texts and topics, we will also consult theoretical articles that reflect on and analyze the fictional texts critically. Students should be prepared to participate actively in class, lead a discussion, and write several papers to help them develop their academic writing skills.

#### ASIA 4200: Postcolonialism and Gender (AS, GS, DS)

This upper-level class looks at postcolonialism through a gendered lens. We will position gender as our central point of reference as we explore theories and topics within postcolonialism, which will also lead us to examine what role gender has played in the contexts of colonialism, nationalism, and globalization. In addition to our exploration of postcolonial and gender theories, we will also make ample use of fictional examples that examine the relations between gender and postcolonialism. While our focus will be on Asia, we will also look at texts from other postcolonial contexts in Africa and Latin America. Students should be prepared to participate actively in class, lead a discussion, and write several papers to help them develop their academic writing skills.

#### ASIA 4210: Gendered Violence (AS/GS)

Gendered violence refers to violence that is directed towards a person or group on the basis of gender. It is an expression of power and control, linked with a sense of entitlement, which maintains gender inequalities. Gendered violence includes rape in war, sexual assault, domestic violence (DV) in heterosexual and same sex partnerships, sexual harassment, and trafficking. Men are the main perpetrators of violence against women (VAW) and other men. However, not all men are violent, men and boys may experience gendered violence and women have the potential to be perpetrators. Violence can occur in same sex relationships. Women and children are most at risk of abuse in their homes at the hands of their intimate male partners, ex-partners or fathers. In contrast, men are more likely to be

abused in public places by male strangers, for example, because they do not conform to dominant constructions of masculinity. The term gendered violence highlights power in the exercise of violence and stresses that biological sex does not determine access to power.

#### ASIA 5000: Senior Thesis in Asian Studies I

An intensive research project undertaken with the permission of and in collaboration with a faculty member.

#### ASIA 5001: Senior Thesis in Asian Studies II

Senior Thesis in Asian Studies may be extended to 2 semesters with the permission of the supervising faculty member and the department.

### **Biological Sciences**

#### BIOL 1002: Conservation Biology

This Course will cover the following ideas resulting in an understanding of biodiversity: Levels of Biodiversity; How biological knowledge can predict changes in biodiversity; Factors threatening different species' persistence; Strategies Biologists use to protect Biodiversity; Population Conservation; Landscape & Regional conservation; Restoration ecology; Sustainable development for human condition. This Course will cover the following ideas resulting in an understanding of why and how biodiversity should be conserved: Ecological & Economic values; Ethical grounds; Habitat conservation; Identifying places rich in species; Areas rich in endemics; Representative habitats; Theory and Practice of Reserve Design (single species approach); Establishing Protected Areas; Principles of Wildlife Management; Habitat management; Habitat measurement; Wildlife management; Perennial patterns of abundance; stable population; Unstable population, Cyclic population, Eruptive population; Region-wide synchronous population; Biodiversity hotspots; Mega-biodiversity countries, World Heritage sites.

#### BIOL 1100: Biology I (with Lab)

General Biology I can fulfill one of the Science/Math course requirements in the core curriculum for any student, and is also a required course for students intending to major in Biological Science, Environmental Science, and Public Health .Biology I will provide students with an understanding of the diversity of animal life at the level of biomolecules, cells and whole organisms, together with an appreciation of a range of fundamental themes in contemporary biology (including cell theory, biological systems, biodiversity, heredity and evolution). Topics will include the basic structure and function of cells, cell energetics and respiration, photosynthesis, trans-membrane transport, signal transduction, intra and inter cellular transport, heredity, the structure and function of DNA, the control of gene expression, cell division, the evolution of multicellularity, tissue structure and function, organ systems, respiration, reproduction, digestion, excretion, and immune system. Students will also conduct a range of laboratory procedures relating to the organization and function of living organisms at the molecular, cellular and whole organism level. Specific experiments investigating scientific method, instrumentation, membrane transport, enzymes kinetics, respiration, mitosis & meiosis, translation, digestion, cell specialization and biotechnology will be carried out.

#### BIOL 1101: Biology II (with Lab)

General Biology II can fulfill one of the Science/Math course requirements in the core curriculum for any student and is also a required course for students intending to major in Biological Science, Environmental Science, and Public Health. Within the overarching theme of evolution, we will build upon your understanding of topics in General Biology I and examine the animals and plants in different ecosystems,



including their adaptations and interactions, and role in energy cycling and nutrient cycling. Practical classes will include field trips and collections, simulation and modeling exercises, microscopy, and experiments. Students will also build professional skills in experimental design and scientific writing. Prerequisite(s): Satisfactory completion of Biology I or at the discretion of the instructor.

Prerequisite(s): Satisfactory completion of Biology I BIOL 3002: Biochemistry (with Lab)

Biochemistry encompasses the chemical and physical nature of biological macromolecules. We will study biochemical pathways in living organisms, with emphasis given to the synthesis and metabolism of the four major classes of macromolecules, carbohydrates, lipids, proteins and nucleic acids, and their key roles in life processes. Discussions will also include biochemistry in nutrition and its influence on eating behavior and biochemical connections with diseases.

Lab sessions will cover the principles and techniques of experimental biochemistry, focusing on isolation methods and techniques for analyzing structure and function, and qualitative and quantitative studies of macromolecules within the cell.

Prerequisite(s): Successful completion of General Biology I and II, and General Chemistry I and II and Organic Chemistry, or at the discretion of the instructor.

BIOL/ ENVS 3003: Ecology (with Lab)

In this course we will study the relationships among living organisms and their physical environment, population growth and regulation, inter-specific interactions, community and ecosystem structure and function, and biogeography. Students should improve their ecological literacy by learning the basic facts, principles and concepts of the field of ecology, improve scientific literacy by learning how ecologists construct knowledge and improve their analytical and writing skills through analysis and interpretation of ecological data.

Prerequisite(s): Satisfactory completion of, or concurrent enrollment in, Biology II

BIOL/PHST 3004: Human Form and Function (with Lab) This is a one-term course on human form and function (anatomy and physiology). We will use a systems approach and focus on the relationship between form and function from the microscopic to gross level of organization; the principle of homeostasis, events that disrupt homeostasis, and feedback pathways that maintain homeostasis; and causal mechanisms in the human body. Topics will include basic anatomical and directional terminology, homeostasis, and the integumentary, muscular, nervous, endocrine, cardiovascular, respiratory, digestive, excretory and reproductive systems. Instruction will use a combination of discussions, lectures, and practical sessions, including case studies, dissections, experiments and simulations, to help you achieve a detailed understanding of human form and function. As a writing intensive course, instruction in writing is a major component of the course and will form a significant part of your assessment. Workshops on the 'anatomy' of a scientific paper, how to read a scientific paper, and dialectical notetaking will prepare you for the process of critically reading, interpreting, and evaluating a scientific paper. These are essential skills for science professionals and will be of value to you during your undergraduate studies at AUW, in addition to your potential graduate studies and/or career.

Pre-requisites: Successful completion of General Biology I and II and General Chemistry I and II or at the discretion of the instructor

BIOL/PHST 3005: Principles of Biostatistics

This is an introductory course of biostatistics that will acquaint the students with the basic concepts of biostatistics and its appropriate uses and common misuses in public health. The course will involve

practice in the application of statistical procedures along with introduction to appropriate statistical software. With the completion of the course the students are expected to have a basic understanding of biostatistical approaches in public health, as well as the ability to perform basic biostatistical analyses.

Prerequisite(s): Satisfactory completion of Algebra

#### BIOL 3111: The Scientific Process

Many science students dream of making an important discovery that contributes to our understanding of biological processes, solves environmental problems, or advances medical research and public health. But how do scientists develop their idea into a research project, obtain funding for their study, and then share their results with the scientific community? This professional development course will follow the pathway from idea to publication and includes topics such as finding relevant literature; developing a research proposal; applying for grants; experimental design; collection and storage of quantitative and qualitative data; field and laboratory research; data repositories, data sharing, and data confidentiality; attending conferences, patents, and publishing your results in international journals. We will use your research ideas to illustrate the different stages and share your progress and obstacles. The Scientific Process is a 2-credit point course designed for UG3 and UG4 biological science, environmental science and public health students, and will be of particular benefit to those considering senior these or graduate school. It is a Pass/Fail course and will not contribute to your GPA but will be listed on your transcript.

#### BIOL 3600: Genes and Genomics (with Lab)

The discipline of genetics has been developing rapidly since the discovery of the famous Watson & Crick structure of DNA in 1953. Classical genetic studies have been replaced by techniques in molecular genetics, and, most recently, genomics and bioinformatics as methods to study the mechanisms of inheritance. This course will discuss genetic approaches to the study of biological function with particular focus on experimental design. The topics include structure and function of genes, chromosomes and genomes, biological variation resulting from recombination, mutation, and selection, use of genetic methods to analyze protein function, gene regulation and inherited disease. We will also consider the social, medical and agricultural applications of genetic technologies with particular focus on their impact on countries in S. Asia in comparison with the U.S. and Europe.

Prerequisite(s): Satisfactory completion of Biology I & Biology II, Chemistry I & Chemistry II or at the discretion of the instructor.

#### BIOL 3601: Cell & Molecular Biology (with Lab)

This course provides an in-depth study of the molecular and biochemical bases for cell structure and functions. Membrane organization, solute translocation, endocytosis and exocytosis, mechanisms of signal transduction, growth control, and oncogenesis will be covered. Mechanisms of DNA replication, repair, as well as mechanisms of gene expression in both prokaryotes and eukaryotes will be discussed. Modern techniques for DNA manipulation will also be examined.

Prerequisite(s): Satisfactory completion of Biology I & Biology II, Chemistry I & Chemistry II or at the discretion of the instructor.

#### BIOL 4002: Environmental Microbiology (with Lab)

Microbes are present in the soil, air and water around us, and even an important component of our own body. Environmental microbiology specifically studies the use of these microbes to benefit society, so students in this course will first discover the diversity of microbes in various environments and their

interaction with each other, before examining the role of microbes in biogeochemical cycles, bioremediation, wastewater treatment, environmental monitoring, conservation, and human disease. Important skills in microbial culture and identification will be developed in lab classes, and the class will conduct large experiments to compare common sterilization techniques that provide safe drinking water, and the effect of chemical contamination on microbes in the environment.

Prerequisite(s): Successful completion of General Biology I and II, and General Chemistry I and II, or at the discretion of the instructor.

#### **BIOL 4101: AbbVie Lectures: Scientific Research with Applications in Medicine and Public Health**

Abbott scientists will present practical applications of their scientific research in pharmacology, medical science and public health. Topics include drug discovery and development, regulation of the drug industry, and control of disease; the topics complement material studied in the course Human Anatomy and Physiology. Students will be assigned papers to read before a weekly teleconference, during which the research process and outcome will be discussed with the leading scientist. This is a 1-credit course, and assessment will be based on participation in group discussions.

Prerequisite(s): Concurrent enrollment in Human Anatomy and Physiology is required.

Similarly, AbbVie Lectures in other Science field (Biology, Organic Chemistry and Biochemistry are available)

#### **BIOL 5000: Senior Thesis in Biology I**

An intensive research project undertaken in collaboration with a faculty member. The student will be expected to write a short proposal, conduct a literature search, design and conduct some independent research (laboratory, field, computational, or library), and present the results in oral and written (thesis) form.

#### **BIOL 5001: Senior Thesis in Biology II**

Senior Thesis in Biology may be extended to 2 semesters with the permission of the supervising faculty member and the department.

### **Computer Science**

#### **CS50 Introduction to Computer Science**

Introduction to the intellectual enterprises of computer science and the art of programming. This course teaches students how to think algorithmically and solve problems efficiently. Topics include abstraction, algorithms, data structures, encapsulation, resource management, security, software engineering, and web development. Languages include C, PHP, and JavaScript plus SQL, CSS, and HTML. Problem sets inspired by real-world domains of biology, cryptography, finance, forensics, and gaming. Designed for concentrators and non-concentrators alike, with or without prior programming experience.

#### **CSCI 1100: Global Information Society**

This course is a broad introduction to the information technologies of today, their regulation and their socioeconomic impacts. The course will begin with a historical review of the modern day “Information Society”, and then will describe the development of new competitive environments. (An introduction to

the relevant principles of economics and regulation will be provided as needed). Students will be introduced to the Internet, international telecommunications networks and how they are regulated nationally and internationally. A review of the World Trade Organization (WTO) and the Information and Communication Technology (ICT) and telecommunications commitments made by members will be covered. This course will also explore issues including: the socio-economic impacts of different ICT based options in daily life (urban and rural), the regulatory evolution of the telecom and ICT industries in different developing regions (mainly focusing on greater Asia), the potentials and regulatory challenges for mobile telephony and the Internet etc. Students will explore issues related to freedom of speech in the age of Internet, privacy, synergy between different high- and low-end technological options, the challenges for the future for both regulatory agencies and telecommunications operators/providers. Detailed case study about the telecom and ICT industry in several developing countries will enable the students to see how the principles are applied in various contexts.

#### CSCI 1101: Fundamentals of Computer (with Lab)

This course aims to provide a brief idea about the basics of computers Systems and Computing, the role of Computers in the society. It will introduce the components of computer (Hardware and software), operating system, networking and Database basics. How a computer program solves the problem and the total procedure to design and implement a program will be experienced in the course. Lab session will focus more on network design, introducing different application programs and web programming.

#### CSCI 1102: Problem Solving and Decision Making

Efficient decision making is of utmost importance in any aspect of an individual's life. People who are able to consistently identify the problem and gauge its importance tend to be in a better position of solving it by choosing the best option among multiple alternatives. The decisions of these people are generally imaginative, logical, solid, and defensible. In this course, students will be equipped with knowledge and tools necessary to become an imaginative, logical problem solver/decision maker. They will explore a structured way to approach and dissect problems and learn to clarify problems in terms of objectives and issues, with a view toward possible outcomes. Finally, the students will apply their acquired knowledge to handle a relevant IT-related project as a hands-on exercise.

#### CSCI 2000: Introduction to Computing & Programming (with Lab)

This course is the fundamental course for learning a programming language. It aims to provide a brief idea about basics of computers Systems, Computer-oriented problem-solving methods and hands-on introduction to the structured programming using C programming language. High level programming language and interactive environment MATLAB® used for numerical computation, visualization, and programming will also be introduced in the laboratory session. This course includes the topics such as numbering systems, processor and memory organization, input/output devices, the basic C language syntax, variable declaration, data types, basic operators, program flow and control structures, defining and using functions, simple data structures such as array, pointers. The methodological approach to program design, implementation and debugging, with emphasis on problem-solving, will also be covered.

#### CSCI 3000: Computer Communications Networks

This course provides an in-depth discussion on data communications principles and technologies, different network models and layers and examines the protocols, designs, implementation, and analysis of computer networks performance. It gives a brief overview of the network infrastructure, network design phases and inspects how the network works to ensure end to end data delivery.

#### CSCI/ ENVS 3001: Numerical Analysis and Computing

Concept of Numerical computation: - Computer Arithmetic: Floating-point representation of numbers, arithmetic operations with normalized floating-point numbers and their consequences, significant figures. Error in number representation-inherent error, truncation, absolute, relative, percentage and round-off error. Solution of Nonlinear (Transcendental & Polynomial) Equations: - Iterative Methods: Bisection, False position, Newton-Rap son method. Iteration method, discussion of convergence, Barstow's method. Solving Sets of Linear Equations: - Solution of Simultaneous Linear Equations: Gauss-Elimination methods, pivoting, Ill-conditioned equations, refinement of solution. Jacobi Iterative method, Gauss-Serial iterative method, Polynomial interpolation & Approximation:- Polynomial interpolation: Newton, LaGrange's, Difference tables, Approximation of functions by Taylor Series. Chebyshev polynomial: First kind, Second kind and their relations, Orthogonal properties. Numerical Differentiation and integration: - Differentiation formulae based on polynomial fit, pitfalls in differentiation, Trapezoidal & Simpson Rules, Gaussian Quadrature. Solving Ordinary Differential Equations: - Euler method, Euler modified method, Taylor-series method, Runge-Kutta methods, Predictor-Corrector methods

#### CSCI 3002: Data Structure and Algorithms

The purpose of this course is to provide the students with solid foundations in the basic concepts of programming: data structures and algorithms. The main objective of the course is to teach the students how to select and design data structures and algorithms that are appropriate for problems that they might encounter. This course is also about showing the correctness of algorithms and studying their computational complexities. This course offers the students a mixture of theoretical knowledge and practical experience. The students will be using either structured programming language "C" to solve the problems and assignments in the laboratory.

#### CSCI 3003: Database Management System

Evolution of database management systems, Entity Relationship Modeling and Design, Relational Data Model and Relational Algebra, Structured Query Language, Transaction Processing, Concurrency Control and Recovery, Client Server and Distributed databases.

#### CSCI 3004: Java Object Oriented Programming

This course will cover topics such as Introduction to Java Language, Introduction to standard tools to program Java, OOP concepts: Encapsulation and Inheritance, Interfacing and abstraction, Polymorphism, Benefits of OOP over procedural programming, Threads, Network connections, Database, Swing/GUI, Servlets, Introduction to design patterns, and Introduction to software engineering.

CSCI 3005: Algorithmic Design and Analysis Introduction to Algorithmic Design, Algorithmic Analysis, Data Structures, Important Algorithmic Design Paradigm- Divide and Conquer, Greedy algorithm, Dynamic Programming, Branch and Bound, Sorting and Searching, Graphs, Sets and Strings, Numerical Problems, Combinatorial Problems, Computation Geometry.

#### CSCI 3006: Discrete Mathematics

Discrete Mathematics will cover the following concepts: Logic and its applications: Propositional Logic, Predicates & Quantifiers, Rules of inference, Methods of proofs, Normal forms, Proving Programs Correct; Sets, Relations and Functions: Sets, Set operations, Relations & their properties, Functions, Sequences and summations, Ordered Sets and Lattices; Graph Theory: - Representing relations, Graphs & graph models, Euler & Hamilton path, Trees; Induction and recursion: Mathematical induction, Recursive definitions & Structural induction; Combinatorics: Basics of counting, Pigeonhole principle, Permutations and

Combinations, Binomial coefficients; Recurrence Relations and Generating Functions; Algebras: Groups, Semi-groups, Rings, and Fields.

#### CSCI 4001: Internet and Mobile Technologies and Applications (with Lab)

This course introduces today's Internet and its functioning to the students in detail. They will acquire clear concepts of inner working of today's Internet. The students will also be given a brief overview of wireless Internet, and various performance metrics which are crucial to investigate an Internet protocol. Moreover, they will be exposed to some Internet-oriented mobile applications from technical points of view which have become integral part of a person's daily life (e.g., Social Media, Banking, Multimedia Apps, Gaming, etc.). Description: Overview of Internet Architecture, Review of TCP/IP protocol stack, TCP in detail, Some TCP variants (Tahoe, Reno, SACK, etc.), Review of IP addressing, Internet Routing Algorithms (RIP, OSPF, BGP), Brief Introduction of Wireless Internet & Network Troubleshooting (basic tools like tcp dump, iperf, etc.). The course will incorporate laboratory sessions which will mainly concentrate on understanding/creating mobile applications running on top of Internet. The chosen mobile platform will be "Android".

Prerequisite(s): 1) Data Communication and Computer Networks, 2) Object Oriented programming

#### CSCI 4002: Artificial Intelligence

Artificial Intelligence is an advanced level course for the students intending major in Computer Science. The ultimate goal of Artificial Intelligence (AI) is to make a computer that can learn, plan, and solve problems autonomously. This course provides a broad introduction to artificial intelligence. Topics will include problem solving, including search and game playing, knowledge and reasoning, including inference, planning, knowledge representation and reasoning under uncertainty and machine learning. We will cover selected topics in Artificial Intelligence. We will study modern techniques for computers to make good (in some cases optimal) decisions that are applicable throughout an enormous range of industrial, civil, medical, financial, robotic and information systems.

#### CSCI 4003: Computer Architecture and Operating System (with Lab)

This course exposes the students to the fundamental of computer architecture and aims to equip them with the know-how of a modern operating system's working. Students will have a thorough knowledge of CPU performance metrics, processes, scheduling concepts, memory hierarchy and management, I/O, storage and file systems, data & control unit design, and pipelining. The students will also be given some brief overview of advanced topics like Parallel Computing, Distributed Systems, Lightweight OSes, Cloud Computing, the challenges inherent to OS/Computer Architecture for faster processing with the advance of hardware, etc. The course will include laboratory sessions as well for a hand-on experience with the topics covered in the lectures.

#### CSCI 4005: Information Systems and Software Engineering

The course will cover foundations of systems development, from a production and innovation perspective. Central concepts covered will be linear, spiral and agile approaches to software development, and techniques for bridging managerial concerns with design and construction of software. The students will acquire skills in design through modeling. Different ways to involve users in system development processes will be covered as well. The course will be delivered both through lectures and exercises. Prerequisite: Satisfactory Completion of Fundamentals of Computers.

#### CSCI 5000: Senior Seminar in CS & ICT

Senior seminar course is for final year student of Computer Science and ICT program. Students will be taught about how to create thesis proposals, do literature review and apply different approaches to attain the goals. They will be exposed to the current and upcoming research trend in computer science and ICT and they will be introduced with various simulation software, learn the technical know how to use them. Students are expected to update weekly about their thesis progress. At the end of the course, students will do an oral presentation of their research findings and submit a thesis report.

## **Psychology**

### **PYSC 2204: Introduction to Counseling**

This course offers a broad survey of the field of counseling. Students will learn theoretical approaches to case conceptualization and treatment, including humanistic, psychodynamic, cognitive, behavioral, and systems. Students will also develop basic skills in listening, attending and responding appropriately through audio-visual materials and role-playing.

### **PSYCH 3001: Psychology of Human Sexuality**

Sexuality can be a source of great pleasure and profound satisfaction. Paradoxically, sexuality can also be a source of guilt and confusion, anger and disappointment, and a means of exploitation and aggression. This course is a broad introduction to the field of human sexuality. We will use biological, social, and psychological approaches to understand human sexuality. Some of the topics we will cover include: historical, cultural, and theoretical perspectives on human sexuality, female/male sexual anatomy, gender, sexuality during development, sexual response and behavior, variations in sexual attraction, orientation, and behavior, contraception, sexual function difficulties and treatment, sexually transmitted diseases, sexual explicit materials and sexual aggression.

### **PSYC 3201: Social Psychology**

How people think, feel, and act is not simply a result of their personalities or predispositions but also a product the social situation in which they find themselves. What others around us think, feel, and do, have a great impact of the way we structure our own thoughts, emotions, and behavior. This is one of the main aspects of Social Psychology. Broadly, this course will cover the following: Making sense of the Self; How people and social situations shape our thoughts, feelings, and actions; how people and the social environments they create influence our attitudes, impressions, and explanations (Social Influence); Pressures to conform to group norms, obeying those in authority and adhering to rules (Social Pressure and Significance of Groups); How we explain others' behaviors, how we like and dislike others (Impression Formation, Attitudes, Attributions, Attraction and Relationships); Negative Attitudes (Prejudice, Racism); Aggression and Helping Behavior; and Persuasive Communication. The basic principle is that our thoughts and actions do not originate solely or simply from within, but that they are products too of the social situations in which we find ourselves.

### **PSYC 3202: Psychology of Gender**

The discipline of psychology has historically had an androcentric view of human behavior, assuming that normal behavior can be identified through the study of male behavior and that female behavior is studied to determine how it differs from "the norm." This course will provide you with an alternative perspective, in which the study of human behavior is just that -- inclusive of all humans, and one in which women's distinctive experiences are not dismissed as unimportant or considered distorted because they do not fit the male norm.

### PSYC / PPE 3208: Political Psychology

Political psychology is an inter-disciplinary field of social science inquiry, with roots in political science and mainly social and cognitive psychology. Political psychologists attempt to understand the psychological underpinnings, roots, and consequences of political behavior. Hence, this field considers the relationship between human thought and political behavior - the psychological account of political phenomena and the political mind. A key theme that will run through the course is the role of emotions on 'rational' political decision making. Political psychology has a practical arm. It explores the dynamics of important 'real-world' phenomena in ways that provide valuable and useful information about politics and behavior. This helps us understand why political events unfold as they do. This course is divided into three sections – considering psychological issues behind individual political figures and leadership; institutional behavior; and political perceptions, emotions, and motivated actions of the public. This will be examined mainly in the backdrop of personality and social influence. Thus, the course will address topics such as understanding behaviors of well-known political figures and historical/political events (past and present); voting behavior; media representations; leadership and decision making; public attitude formation; racism and prejudice; conflict, accepting and participating in violence.

### PSYC 3209: Theoretical Approaches to Mental Health and Illness

This course will explore a range of theoretical approaches to mental health and illness proposed by bio-medical, psychological and sociological perspectives. In the first part of the course, students will examine biological determinants of psychological disorders put forth by genetic and neuroscience paradigms. Following this, the contributions made by psychoanalytic, cognitive and humanistic approaches within the field of psychology will be discussed. Finally, the course will turn to perspectives offered within sociology, including those of social determinism, social constructivism and realism. Students will therefore be encouraged to think critically about constructions and beliefs of mental illness and to develop a holistic and multi-disciplinary understanding of mental health and well-being.

### PSYCH 3210 Research Methods in Psychology

A research methods survey course providing the fundamentals of research design and behavior, scientific writing using APA style, critical evaluation of research literature, and ethical issues in research. Students will actively engage in asking research questions, formulating research hypotheses, designing and conducting a research study, and presenting results.

Prerequisite: Probability & Statistics OR Biostatistics

### PSYCH/PPE 3300: Leadership, Politics and Psychology

Political psychology explores the dynamics of important 'real-world' phenomena in ways that provide valuable and useful information about politics and behavior. This helps us understand why political behaviors and events unfold as they do. This course considers psychological issues behind political leadership, institutional behavior, political perceptions, emotions, and motivated actions. Leadership includes understanding the self as well as motivating, inspiring, managing, guiding, and supporting others to function ethically and effectively. The key aspect of this course is that it offers a theoretical understanding as well as a practical training to understanding political leadership behavior from a psychological perspective. The theoretical component will focus on the political mind and behavior of leaders and leadership from cognitive, social, and personality psychology perspectives. Leadership will be evaluated as a process of influence and empowerment, and types of leadership such as transformational, authentic, situational, and educational leadership will be critically assessed. The course will address topics such as understanding behaviors of well-known political figures and historical/political events (past and present). The theoretical component will also include understanding how the political context affects the



individual, group dynamics, emotional intelligence, and inter-personal conflict. The practical component will focus on self-development, self-awareness, and self-confidence. Students will be encouraged to re-evaluate themselves in terms of how they perceive their personal and social world; improve the way they relate to other people in society; and improve their interactions with others in society. This course will help students understand functional leadership, learn to think like leaders and develop skills and competencies in leadership and mentoring roles. Students will also be encouraged to develop their own style of leadership, recognize, and capitalize on existing strengths as well as developing key competencies critical to positive and effective leadership. These include self-discipline, positive thinking, confronting disappointment, criticism, and negative peer pressure, and perseverance. Essentially, this course offers rigorous theoretical knowledge on the psychology of leadership and learning life skills and competencies so that students have essential tools to live better in society.

#### PSYC / ASIA 3420: Cultural Psychology

North American psychology has been characterized as “a child of its culture,” and as bound by Western concepts of individualism. Psychology as a field has tended to focus on the behavior of members of North American and Western European countries. Recently, cross-cultural research in psychology has demonstrated that many psychological processes once assumed to be universal (i.e., shared by members of all cultures) are actually quite culture bound. Although a few topics on psychology have a relatively long history of cross-cultural investigation, psychologists are becoming more aware that all the topics on psychology must be examined from a broad cultural perspective. In light of the growing recognition of culture-bound aspects of American psychology, psychologists have increasingly examined ways in which Western psychological concepts can be used in ethnocentric ways and are attempting to place psychology in a more global, diverse perspective. This course will explore the ways in which psychology is socially constructed. In contrast to the view that psychological processes are essentially the same everywhere, we will examine how psychological processes are inextricably linked to specific social, cultural, and historical contexts. Through discussions, readings, and activities, students can expect to develop a broader, global perception of contemporary psychology and a useful set of critical-thinking tools with which to analyze and evaluate psychology. The academic standards and policies, courses, and curricula described in this Bulletin are subject to change or cancellation by official action of the Asian University for Women. Failure to read this Bulletin does not excuse students from the requirements and provisions described herein.

Asian University for Women  
20 M. M. Ali Road  
Chittagong—4000,  
Bangladesh

[www.asian-university.org](http://www.asian-university.org)