

2016-2017 Undergraduate Calendar

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2016-2017 academic year, including the Summer Semester 2016, the Fall Semester 2016 and the Winter Semester 2017.

For your convenience the Undergraduate Calendar is available in PDF format.

If you wish to link to the Undergraduate Calendar please refer to the Linking Guidelines.

The University is a full member of:

- The Association of Universities and Colleges of Canada

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Revision Information:

| Date | Description |
|--------------------|---------------------|
| February 1, 2016 | Initial Publication |
| February 3, 2016 | Second Publication |
| March 4, 2016 | Third Publication |
| April 5, 2016 | Fourth Publication |
| July 5, 2016 | Fifth Publication |
| August 25, 2016 | Sixth Publication |
| September 21, 2016 | Seventh Publication |
| January 12, 2017 | Eighth Publication |
| January 31, 2017 | Ninth Publication |

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Disclaimer

University of Guelph 2016

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2016-2017 academic year, including the Summer Semester 2016, the Fall Semester 2016 and the Winter Semester 2017.

The University reserves the right to change without notice any information contained in this calendar, including fees, any rule or regulation pertaining to the standards for admission to, the requirements for the continuation of study in, and the requirements for the granting of degrees or diplomas in any or all of its programs. The publication of information in this calendar does not bind the University to the provision of courses, programs, schedules of studies, or facilities as listed herein.

The University will not be liable for any interruption in, or cancellation of, any academic activities as set forth in this calendar and related information where such interruption is caused by fire, strike, lock-out, inability to procure materials or trades, restrictive laws or governmental regulations, actions taken by faculty, staff or students of the University or by others, civil unrest or disobedience, public health emergencies, or any other cause of any kind beyond the reasonable control of the University.

In the event of a discrepancy between a print version (downloaded) and the Web version, the Web version will apply.

Published by: Enrolment Services

Introduction

Collection, Use and Disclosure of Personal Information

Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) <http://www.e-laws.gov.on.ca/index.html>. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes. Certain personal information is disclosed to external agencies, including the Ontario Universities Application Centre, the Ministry of Training, Colleges and Universities, and Statistics Canada, for statistical and planning purposes, and is disclosed to other individuals or organizations in accordance with the Office of Registrar Services Departmental Policy on the Release of Student Information. For details on the use and disclosure of this information call the Office of Registrar Services at the University at (519) 824-4120 or see <http://www.uoguelph.ca/registrar/registrar/index.cfm?index>.

Disclosure of Personal Information to the Ontario Ministry of Training, Colleges and Universities

The University of Guelph is required to disclose personal information such as characteristics and educational outcomes to the Minister of Training, Colleges and Universities under s. 15 of the Ministry of Training, Colleges and Universities Act, R.S.O. 1990, Chapter M.19, as amended. The Ministry collects this data for purposes including but not limited to planning, allocating and administering public funding to colleges, universities and other post-secondary educational and training institutions.

Amendments made to the MTCU Act, authorizing the collection and use of personal information from colleges and universities by the Minister of Training Colleges and Universities, which were set out in Schedule 5 of the Childcare Modernization Act, 2014, came into force on March 31, 2015.

The amendments strengthen the ability of the Minister to directly or indirectly collect and use personal information about students as required to conduct research and analysis, including longitudinal studies, and statistical activities conducted by or on behalf of the Ministry for purposes that relate to post-secondary education and training, including,

- i. understanding the transition of students from secondary school to post-secondary education and training,
- ii. understanding student participation and progress, mobility and learning and employment outcomes,
- iii. understanding linkages among universities, colleges, secondary schools and other educational and training institutions prescribed by regulation,
- iv. understanding trends in post-secondary education or training program choices made by students,
- v. understanding sources and patterns of student financial resources, including financial assistance and supports provided by government and post-secondary educational and training institutions,
- vi. planning to enhance the affordability and accessibility of post-secondary education and training and the quality and effectiveness of the post-secondary sector,
- vii. identifying conditions or barriers that inhibit student participation, progress, completion and transition to employment or future post-secondary educational or training opportunities, and
- viii. developing key performance indicators.

Information that the University is required to provide includes but is not limited to: first, middle and last name, Ontario Educational Number, citizenship, date of birth, gender, first three digits of a student's postal code, mother tongue, degree program and major(s) in which the student is enrolled, year of study and whether the student has transferred from another institution.

Further information on the collection and use of student-level enrolment-related data can be obtained from the Ministry of Training Colleges and Universities website: <http://www.tcu.gov.on.ca> (English) or <http://www.tcu.gov.on.ca/fre/> (French) or by writing to the Director, Postsecondary Finance and Information Management Branch, Postsecondary Education Division, 7th Floor, Mowat Block, 900 Bay Street, Toronto, ON M7A 1L2.

An update on Institutional and MTCU Notice of Disclosure Activities is posted at <http://www.tcu.gov.on.ca/pepg/publications/NoticeofCollection.pdf>

Frequently Asked Questions related to the Ministry's enrolment and OEN data activities are also posted at: <http://www.tcu.gov.on.ca/pepg/publications/FAQs.html>

Authority to Disclose Personal Information to Statistics Canada

The Ministry of Training, Colleges and Universities discloses student-level enrolment-related data it collects from the colleges and universities as required by Statistics Canada in accordance with Section 13 of the Federal Statistics Act. This gives MTCU authority to disclose personal information in accordance with s. 42(1) (e) of FIPPA

Notification of Disclosure of Personal Information to Statistics Canada

For further information, please see the Statistics Canada's web site at <http://www.statcan.ca> and Section XIV Statistics Canada.

Address for University Communication

Depending on the nature and timing of the communication, the University may use one of these addresses to communicate with students. Students are, therefore, responsible for checking all of the following on a regular basis:

Email Address

The University issued email address is considered an official means of communication with the student and will be used for correspondence from the University. Students are responsible for monitoring their University-issued email account regularly. See Section I--Statement of Students' Academic Responsibilities for more information.

Home Address

Students are responsible for maintaining a current mailing address with the University. Address changes can be made, in writing, through Enrolment Services.

Name Changes

The University of Guelph is committed to the integrity of its student records, therefore, each student is required to provide either on application for admission or on personal data forms required for registration, his/her complete, legal name. Any requests to change a name, by means of alteration, deletion, substitution or addition, must be accompanied by appropriate supporting documentation.

Student Confidentiality and Release of Student Information Policy Excerpt

The University undertakes to protect the privacy of each student and the confidentiality of his or her record. To this end the University shall refuse to disclose personal information to any person other than the individual to whom the information relates where disclosure would constitute an unjustified invasion of the personal privacy of that person or of any other individual. All members of the University community must respect the confidential nature of the student information which they acquire in the course of their work.

Complete policy at <https://uoguelph.civicweb.net/document/68892/ORSInfoReleasePolicy060610.pdf?handle=FF982F8A9AEA4076BE4F3D88147172B8>.

Learning Outcomes

On December 5, 2012, the University of Guelph Senate approved five University-wide Learning Outcomes as the basis from which to guide the development of undergraduate degree programs, specializations and courses:

1. Critical and Creative Thinking
2. Literacy
3. Global Understanding
4. Communicating
5. Professional and Ethical Behaviour

These learning outcomes are also intended to serve as a framework through which our educational expectations are clear to students and the broader public; and to inform the process of outcomes assessment through the quality assurance process (regular reviews) of programs and departments.

An on-line guide to the learning outcomes, links to the associated skills, and detailed rubrics designed to support the development and assessment of additional program and discipline-specific outcomes, are available for reference on the [Learning Outcomes website](#).

1. Critical and Creative Thinking

Critical and creative thinking is a concept in which one applies logical principles, after much inquiry and analysis, to solve problems in with a high degree of innovation, divergent thinking and risk taking. Those mastering this outcome show evidence of integrating knowledge and applying this knowledge across disciplinary boundaries. Depth and breadth of understanding of disciplines is essential to this outcome.

In addition, **Critical and Creative Thinking** includes, but is not limited to, the following outcomes: **Inquiry and Analysis; Problem Solving; Creativity; and Depth and Breadth of Understanding.**

2. Literacy

Literacy is the ability to extract information from a variety of resources, assess the quality and validity of the material, and use it to discover new knowledge. The comfort in using quantitative literacy also exists in this definition, as does using technology effectively and developing visual literacy.

In addition, **Literacy** includes, but is not limited to, the following outcomes: **Information Literacy, Quantitative Literacy, Technological Literacy, and Visual Literacy.**

3. Global Understanding:

Global understanding encompasses the knowledge of cultural similarities and differences, the context (historical, geographical, political and environmental) from which these arise, and how they are manifest in modern society. Global understanding is exercised as civic engagement, intercultural competence and the ability to understand an academic discipline outside of the domestic context.

In addition, **Global Understanding** includes, but is not limited to, the following outcomes: **Global Understanding, Sense of Historical Development, Civic Knowledge and Engagement, and Intercultural Competence.**

4. Communicating

Communicating is the ability to interact effectively with a variety of individuals and groups, and convey information successfully in a variety of formats including oral and written communication. Communicating also comprises attentiveness and listening, as well as reading comprehension. It includes the ability to communicate and synthesize information, arguments, and analyses accurately and reliably.

In addition, **Communicating** includes, but is not limited to, the following outcomes: **Oral Communication, Written Communication, Reading Comprehension, and Integrative Communication.**

5. Professional and Ethical Behaviour

Professional and ethical behaviour requires the ability to accomplish the tasks at hand with proficient skills in teamwork and leadership, while remembering ethical reasoning behind all decisions. The ability for organizational and time management skills is essential in bringing together all aspects of managing self and others. Academic integrity is central to mastery in this outcome.

In addition, **Professional and Ethical Behaviour** includes, but is not limited to, the following outcomes: **Teamwork, Ethical Reasoning, Leadership, and Personal Organization and Time Management**

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Bachelor of Arts and Sciences (B.A.S.)

The University of Guelph offers an 8 semester (20.00 credits) honours program leading to a Bachelor of Arts and Sciences (B.A.S.) degree.

The Bachelor of Arts & Sciences program is designed for students who are motivated equally by the study of Arts/Social Sciences and the Sciences, and who find challenge and satisfaction in testing the traditional boundaries of study through undergraduate level interdisciplinary work. The program meets these objectives through a unique structure that accredits students in an Arts/Social Sciences core, a Sciences core, a Subject Area core of interdisciplinary humanities and sciences courses (ASCI*), and a minor in each of the Arts/Social Sciences and the Sciences (see program information for choices of minors). The structure of the program ensures disciplinary rigour and breadth through completion of core requirements for a B.A.S. degree, concentration in two distinct minors, and concentration of learning in an academic cohort of B.A.S. students through the interdisciplinary ASCI courses in the B.A.S. core. This core is open only to students in the B.A.S. program.

Program Information

Academic Counselling

The B.A.S. program counsellor assists students in the selection of minors, interpreting program and academic regulations, and with the selection of appropriate courses for chosen minors and distribution requirements. Students should consult the counsellor when experiencing particular difficulties affecting academic standing and progress through the program. Students are encouraged to check the B.A.S. program website regularly for course information and cross-listing of acceptable credits where appropriate.

Counselling on Minors

Academic departments offer the minors in the B.A.S. program and assign faculty advisors to assist students with academic planning (e.g., a faculty advisor in the History department handles queries about a minor in History). Students should consult the appropriate faculty advisor, along with the B.A.S. Program Counsellor, when requiring advice on the completion of specialization requirements. The list of faculty advisors is available on the Undergraduate Academic Information Centre website: <http://www.uoguelph.ca/uaiic/facultyadvisors> or contact the B.A.S. Program Counsellor for further information.

Continuation of Study

To be eligible to continue in the program, students must meet the requirements for Continuation of Study as noted in Section VIII--Undergraduate Degree Regulations & Procedures of this calendar (Schedules 1 and 2).

Conditions for Graduation

To qualify for the degree Bachelor of Arts and Sciences, the student must successfully complete a minimum of 20.00 credits as identified below. In addition, students must meet the continuation of study requirements at the time of graduation and have a 60.00% cumulative average.

Distribution Requirements

This program will require the completion of 20.00 credits as indicated below, with a maximum of 7.00 credits at the 1000 level. First year core courses may be counted towards the minors.

1. Science Core - 2.00 credits.
2. Arts/Social Science core - 2.00 credits.
3. Subject Area Core - (ASCI) - 3.00 credits.
4. Arts/Social Science Minor - 5.00 credits minimum.
5. Science Minor - 5.00 credits minimum.
6. Free Electives - 3.00 credits.

1. Science Core - 2.00 credits

Science Core - 2.00 credits as identified by minor below:

Core Requirements for BAS Science Minors

| If you choose this BAS Science Minor, then | The BAS Science Core Requirements would be: |
|--|---|
| Agriculture | BIOL*1070, BIOL*1090, [(CHEM*1040, CHEM*1050) or (MATH*1080, STAT*2040)] |
| Biochemistry | BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1040 |
| Biology | BIOL*1070, BIOL*1090, [(CHEM*1040, CHEM*1050) or (MATH*1080, STAT*2040)] |
| Biotechnology | BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050 |
| Chemistry | CHEM*1040, CHEM*1050, MATH*1200, MATH*1210 |
| Computing & Information Science | CIS*1500, CIS*2500, (2 of BIOL*1070, BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050, MATH*1080, PHYS*1070, PHYS*1080) |
| Ecology | BIOL*1070, BIOL*1090, STAT*2040, (MATH*1080 or MATH*1200) |
| GIS & Environmental Analysis | GEOG*1300, (1 of MATH*1080, MATH*1200, CIS*1500), (STAT*2040 or GEOG*2460), (1 of BIOL*1070, BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050) |
| Mathematics | MATH*1200, MATH*1210, STAT*2040, (1 of BIOL*1070, BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050, PHYS*1070, PHYS*1080) |
| Mathematical Sciences | MATH*1200, MATH*1210, STAT*2040, (1 of CIS*1000, CIS*1200, CIS*1500) |
| Microbiology | BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050 |
| Molecular Biology and Genetics | BIOL*1080, BIOL*1090, (CHEM*1040, CHEM*1050) |
| Neuroscience | BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050 |
| Nutritional and Nutraceutical Sciences | BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050 |
| Plant Science | BIOL*1070, BIOL*1090, CHEM*1040, CHEM*1050 |
| Physics | IPS*1500 and IPS*1510 recommended or [PHYS*1070, PHYS*1080, (MATH*1200 or MATH*1080), (MATH*1210 or MATH*2080)] |
| Psychology: Brain and Cognition | MATH*1080, (PHYS*1010 or STAT*2040), (2 of BIOL*1070, BIOL*1080, BIOL*1090, CHEM*1040, CHEM*1050, PHYS*1070, PHYS*1080) |
| Statistics | MATH*1200, MATH*1210, STAT*2040, STAT*2050 |
| Zoology | BIOL*1070, BIOL*1090, [(CHEM*1040, CHEM*1050) or [STAT*2040, (MATH*1080 or MATH*1200)]] |

2. Arts and Social Science Core - 2.00 credits including:

- 1.00 credits over at least 2 different subject areas in the College of Arts: ARTH - Art History; CHIN - Mandarin; CLAS - Classical Studies; ENGL - English; EURO - European Studies; FREN - French Studies; GERM - German Studies; GREK - Greek; HIST - HISP - Hispanic Studies; History; HUMN - Humanities; ITAL - Italian Studies; LAT - Latin Studies; LING - Linguistics; MUSC - Music; PHIL - Philosophy; PORT - Portuguese; THST - Theatre Studies.

- 1.00 credits over at least 2 different subject areas (listed below) in the College of Social and Applied Human Sciences or College of Business and Economics: ANTH - Anthropology; ECON - Economics; GEOG - Geography; IDEV - International Development Studies; ISS - Interdisciplinary Social Science; POLS - Political Science; PSYC - Psychology; SOAN - Sociology and Anthropology; SOC - Sociology; UNIV - Interdisciplinary University.

3. Subject Area Core (ASCI) - 3.00 credits

- 1.50 credits from:

| | | |
|----------------------|--------|--|
| ASCI*1110 | [0.50] | Society and Inquiry I |
| ASCI*1120 | [0.50] | Society and Inquiry II |
| ASCI*2050 | [0.50] | Uses of Knowledge |
| • 0.50 credits from: | | |
| ASCI*3000 | [0.50] | Arts and Sciences Community Project |
| ASCI*3100 | [0.50] | Case Studies in Arts and Sciences Research |
| ASCI*3700 | [0.50] | Independent Studies in Arts/Sciences |
| • 1.00 credits from: | | |
| ASCI*4010 | [1.00] | Arts and Sciences Honours Research Seminar |
| ASCI*4020 | [0.50] | Topics in Arts and Sciences Research |
| ASCI*4030 | [0.50] | Topics in Arts and Sciences Research |
| ASCI*4700 | [0.50] | Independent Studies in Arts/Sciences |
| ASCI*4710 | [0.50] | Independent Studies in Arts/Sciences |

Note: Of the 20.00 credits required for this program, 3.00 credits must be completed at the 3000 or 4000 level, and 2.00 credits at the 4000 level. This requirement is partially fulfilled by senior level courses in the Subject Core (ASCI) requirements.

4. Arts/Social Sciences Minors - 5.00 credits (Minimum)

Minors available in the Arts/ Social Sciences core (see B.A. program descriptions):

Anthropology
 Art History
 Business
 Business Economics
 Classical Studies
 Criminal Justice & Public Policy
 Economics
 English
 European Culture and Civilization
 Family & Child Studies
 French Studies
 Geography
 German
 History
 International Development
 Italian
 Marketing
 Media and Cinema Studies
 Museum Studies
 Music
 Philosophy
 Political Science
 Psychology
 Sociology
 Spanish and Hispanic Studies
 Theater Studies

5. Science Minor - 5.00 credits (Minimum)

Minors available in the Science core (see B.Sc. program descriptions):

Agriculture (see B.Sc.(Agr.) program description)
 Biochemistry
 Biology
 Biotechnology
 Chemistry
 Computing & Information Science
 Ecology
 GIS* & Environmental Analysis
 Mathematics
 Mathematical Science
 Microbiology
 Molecular Biology and Genetics
 Neuroscience
 Nutritional and Nutraceutical Sciences
 Physics
 Plant Science
 Psychology: Brain and Cognition
 Statistics
 Zoology
 * Geographic Information Systems

6. Free Electives - 3.00 credits

The program includes 3.00 free electives. Electives may be completed in any subject area. The number of free electives is reduced if a minor requires more than 5.00 credits.

This program includes 3.00 credits at the 3000 or 4000 level, including 2.00 credits at the 4000 level. This requirement is partially fulfilled by senior level courses in the Subject Area Core (ASCI) requirements.

A maximum of 7.00 credits at the 1000 level may be counted toward the 20.00 credits requirement.

Students cannot, of course, select Psychology or Mathematics for both their B.Sc. and B.A. minors.

Double Counting Rule

A maximum of 3.00 credits may be double-counted:

- 1.00 credits may be double-counted between minors.
- 2.00 credits may be double-counted between a core and one minor.

Students may not triple-count a course between a core and two minors.