

## 2018-2019 Undergraduate Calendar

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2018-2019 academic year, including the Summer Semester 2018, the Fall Semester 2018 and the Winter Semester 2019.

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:

- Universities Canada

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# Disclaimer

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## University of Guelph 2018

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The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2018-2019 academic year, including the Summer Semester 2018, the Fall Semester 2018 and the Winter Semester 2019.

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.

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## Introduction

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### Collection, Use and Disclosure of Personal Information

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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 Advanced Education and Skills Development, and Statistics Canada, for statistical and planning purposes, and is disclosed to other individuals or organizations in accordance with the Office of Registrarial Services Departmental Policy on the Release of Student Information. For details on the use and disclosure of this information call the Office of Registrarial 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 Advanced Education and Skills Development

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The University of Guelph is required to disclose personal information such as characteristics and educational outcomes to the Minister of Advanced Education and Skills Development under s. 15 of the Ministry of Advanced Education and Skills Development 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 Ministry of Advanced Education and Skills Development Act, authorizing the collection and use of personal information from colleges and universities by the Minister of Advanced Education and Skills Development, 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 Advanced Education and Skills Development website: <https://www.ontario.ca/page/ministry-advanced-education-and-skills-development> (English) or <https://www.ontario.ca/fr/page/ministere-de-lenseignement-superieur-et-de-la-formation-professionnelle> (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 Ministry of Advanced Education and Skills Development Act Notice of Disclosure Activities is posted at <https://www.ontario.ca/page/ministry-advanced-education-and-skills-development>

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

#### Authority to Disclose Personal Information to Statistics Canada

The Ministry of Advanced Education and Skills Development 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 Ministry of Advanced Education and Skills Development Act authority to disclose personal information in accordance with s. 42(1) (e) of FIPPA

### Notification of Disclosure of Personal Information to Statistics Canada

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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

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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

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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

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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

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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

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Critical and creative thinking is a concept in which one applies logical principles, after much inquiry and analysis, to solve problems 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

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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:

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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

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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

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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/uaic/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.

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.

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

When choosing their courses in the science core, students are advised to keep prerequisites for their BAS Science Minor in mind. For a list of suggested core science courses for each specific BAS Science Minor, please consult the BAS website (<https://www.uoguelph.ca/bas/>)

2.00 credits from:

BIOC*2580	[0.50]	Introduction to Biochemistry
BIOL*1070	[0.50]	Discovering Biodiversity
BIOL*1080	[0.50]	Biological Concepts of Health
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
CHEM*1040	[0.50]	General Chemistry I
CHEM*1050	[0.50]	General Chemistry II
CIS*1500	[0.50]	Introduction to Programming
CIS*2500	[0.50]	Intermediate Programming
GEOG*1300	[0.50]	Introduction to the Biophysical Environment
GEOG*2460	[0.50]	Analysis in Geography
IPS*1500	[1.00]	Integrated Mathematics and Physics I
IPS*1510	[1.00]	Integrated Mathematics and Physics II

MATH*1080	[0.50]	Elements of Calculus I
MATH*1200	[0.50]	Calculus I
MATH*1210	[0.50]	Calculus II
MATH*2080	[0.50]	Elements of Calculus II
PHYS*1070	[0.50]	Physics for Life Sciences II
PHYS*1080	[0.50]	Physics for Life Sciences
PHYS*1300	[0.50]	Fundamentals of Physics
STAT*2040	[0.50]	Statistics I
STAT*2050	[0.50]	Statistics II

#### 2. Arts and Social Science Core - 2.00 credits

- 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 - History; HUMN - Humanities; ITAL - Italian Studies; LAT - Latin Studies; LING - Linguistics; MUSC - Music; PHIL - Philosophy; PORT - Portuguese; SART - Studio Art; SPAN - Spanish and Hispanic Studies; 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; FRHD - Family Relations and Human Development; GEOG - Geography; IDEV - International Development Studies; ISS - Interdisciplinary Social Science; POLS - Political Science; PSYC - Psychology; SOAN - Sociology and Anthropology; SOC - Sociology; UNIV - Interdisciplinary University; WMST - Women Studies.

#### 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

#### 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  
 Theatre 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  
Statistics  
Zoology  
\* Geographic Information Systems

**Note:** Students cannot select Psychology or Mathematics for both their B.Sc. and B.A. minors.

### **6. Free Electives - 3.00 credits**

The program includes 3.00 free electives. Electives may be completed in any subject area.

#### **Double Counting Rule**

A maximum of 3.00 credits may be double-counted:

- a. 1.00 credits may be double-counted between minors.
- b. Up to 1.00 credits may be double-counted between the science core and a minor; and up to 1.00 credits may be double-counted between the arts and social science core and a minor.

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