2006-2007 Undergraduate Calendar

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2006-2007 academic year, including the Summer Semester 2006, the Fall Semester 2006 and the Winter Semester 2007.

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.

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Contact Information:

University of Guelph
Guelph, Ontario, Canada
N1G 2W1
519-824-4120
http://www.uoguelph.ca

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Disclaimer

University of Guelph 2006

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The University reserves the right to change without notice any information contained in this calendar, including 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.

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Bachelor of Computing (B.Comp.)

Students graduating from this program obtain a solid foundation in the theory and application of all aspects of computing and information science. Core subjects, combined with in-depth study in an area of application, give students the freedom to combine their interests in computing with other areas of study and application.

Guelph's Bachelor of Computing degree combines the necessary theoretical background with an applied focus to learning. Course projects which are based on real-world software development scenarios allow students to get the practical experience valued by today's high-tech employers. The focused study in a second discipline gives students the necessary background to effectively apply their knowledge.

For the degree of Bachelor of Computing the University of Guelph offers a specialized program requiring the equivalent of 8 semesters of successful full-time study (honours program) and a general program requiring the equivalent of 6 semesters of successful full-time study (general program). The honours program is also available as a Co-op degree.

A student may register in any of the 3 semesters (Summer, Fall, Winter). Since not all courses are offered in every semester and prerequisite dependencies must be observed, students are encouraged to consult the program counsellor for the B.Comp. program to plan an initial program of study or when considering modifications to the suggested schedule of studies list (below).

Program Information

B.Comp. Program Regulations

The general program is designed to provide a sound general education in computing.

The honours program is designed to provide depth of study and specialization beyond that available in the general program, while at the same time ensuring a complementary background in an area of application.

1. Requirements for a General Degree

To graduate from a general program a student must:

a. earn 15.00 credits. These must include courses that fulfill the distribution requirements of the General Degree (see below). At least 4.00 credits must be at the 3000 level or above. Not more than 6.00 credits at the introductory (1000) level may be counted towards the 15.00 credit requirement.

b. no more than 11.00 credits in any one subject or discipline, as indicated by the course prefix code, can be counted towards a general degree.

c. successfully complete the following credits:

CIS*1500	[0.50]	Introduction to Programming
CIS*1910	[0.50]	Discrete Structures in Computing I
CIS*2430	[0.50]	Object Oriented Programming
CIS*2500	[0.50]	Intermediate Programming
CIS*2520	[0.50]	Data Structures
CIS*2750	[0.75]	Software Systems Development and Integration
CIS*2910	[0.50]	Discrete Structures in Computing II
CIS*3530	[0.50]	Data Base Systems and Concepts

0.5 additional C.I.S. or STAT credits at the 2000 level or higher
1.0 additional C.I.S. credits at 3000 level or higher

d. Earn 2.00 science credits (list of courses available in the Program Counsellor's office) and 2.00 credits in the College of Arts or College of Social and Applied Human Sciences in addition to the courses listed in c.

2. Requirements for an Honours Degree

To graduate from an honours program a student must:

a. successfully complete 20.00 credits. These must include the 11.75 credits that fulfill the Computing Core Requirements (below), a minimum of 4.00 credits in an Area of Application (below) and an additional 4.25 credits as free electives. Not more than 6.00 credits from courses at the introductory (1000) level may be counted towards the 20.00 credit requirement.

The program requires 6.00 credits at the 3000 level or above and 2.00 credits at the 4000 level, while the area of application requires an additional 1.00 credits at the 3000 level or above. The Area of Application is a graduation requirement and must be approved by Semester 4 by the faculty advisor.

b. complete the following Computing Core Requirements:

CIS*1500	[0.50]	Introduction to Programming
CIS*1910	[0.50]	Discrete Structures in Computing I
CIS*2030	[0.50]	Structure and Application of Microcomputers
CIS*2430	[0.50]	Object Oriented Programming
CIS*2460	[0.50]	Modelling of Computer Systems
CIS*2500	[0.50]	Intermediate Programming
CIS*2520	[0.50]	Data Structures
CIS*2750	[0.75]	Software Systems Development and Integration
CIS*2910	[0.50]	Discrete Structures in Computing II
CIS*3110	[0.50]	Operating Systems
CIS*3490	[0.50]	The Analysis and Design of Computer Algorithms
CIS*3530	[0.50]	Data Base Systems and Concepts
CIS*3750	[0.75]	System Analysis and Design in Applications
CIS*4000	[0.50]	Applications of Computing Seminar
MATH*1200	[0.50]	Calculus I
STAT*2040	[0.50]	Statistics I

1.75 additional C.I.S. credits at the 3000 level or above
1.50 additional C.I.S. credits at the 4000 level or above

c. obtain a cumulative average at least 70% in CIS courses. Students who do not satisfy this requirement at graduation may apply for a General Degree.

d. earn at least 4.00 credits in an Area of Application with at least 1.00 credits at the 3000 level or above. These credits must be taken from a single department or subject other than Computing and Information Science.

An area of Application normally consists of 4.00 credits (normally 8 courses) of a minor. Minors in the B.A. program and B.Sc. Minors are listed in Section X of the Calendar. A student may complete a minor should they decide to do so.

Students must consult the faculty advisor for approval of their Area of Application in semester 4.

Some courses may have enrolment restrictions placed on them.

Students failing to meet the graduation requirements of the honours program may apply to graduate with a general degree if the requirements for the general degree are met.

3. Continuation of Study

Students are advised to consult the regulations for Continuation of Study which are outlined in detail in Section VIII--Degree Regulations & Procedures of this calendar.

Schedule of Studies

Since many courses are offered in only one semester and course prerequisites place an ordering on courses, the following program of studies is designed so that students can schedule their courses over 8 semesters of study. Students deviating from this schedule must consult with their academic advisor. This schedule assumes a Fall/Winter semester sequence.

Major (Honours Program)

School of Computing and Information Science, College of Physical and Engineering Science

Semester 1

CIS*1500	[0.50]	Introduction to Programming
MATH*1200	[0.50]	Calculus I

1.50 credits in the Area of Application or electives

Semester 2

CIS*1910	[0.50]	Discrete Structures in Computing I
CIS*2500	[0.50]	Intermediate Programming

1.50 credits in the Area of Application or electives

Semester 3

CIS*2030	[0.50]	Structure and Application of Microcomputers
CIS*2430	[0.50]	Object Oriented Programming
CIS*2520	[0.50]	Data Structures
CIS*2910	[0.50]	Discrete Structures in Computing II

0.50 credits in the Area of Application or electives

Semester 4

CIS*2750	[0.75]	Software Systems Development and Integration
CIS*3110	[0.50]	Operating Systems
CIS*3490	[0.50]	The Analysis and Design of Computer Algorithms
STAT*2040	[0.50]	Statistics I

0.25 credits in the Area of Application or elective

Semester 5

CIS*2460	[0.50]	Modelling of Computer Systems
CIS*3530	[0.50]	Data Base Systems and Concepts
CIS*3750	[0.75]	System Analysis and Design in Applications

0.75 credits in the Area of Application or electives

Semester 6

Alternative 1 [Recommended]

CIS*3760	[0.75]	Software Engineering

0.50 C.I.S electives at the 3000 level or above
1.25 credits in the Area of Application or electives
OR Alternative 2
(1.50 C.I.S electives at the 3000 level or above
1.00 credits in the Area of Application or electives)

Semester 7

1.00 credits in the Area of Application or electives
0.50 credits in C.I.S. at 3000 level or above
1.00 credits in C.I.S. at the 4000 level

Semester 8

CIS*4000	[0.50]	Applications of Computing Seminar

1.50 credits in the Area of Application or electives

0.50 credits in C.I.S. at the 4000 level

Schedule of Studies Co-op

Since many courses are offered in only one semester and course prerequisites place an ordering on courses, the following program of studies is designed so that students can schedule their courses over 8 semesters of study. Students deviating from this schedule must consult with their Co-op faculty advisor. This schedule assumes a Fall/Winter semester sequence.

Major Co-op (Honours Program)

School of Computing and Information Science, College of Physical and Engineering Science

The Honours Bachelor of Computing degree is also available as a Co-operative Education Program. Students may apply for this option at the time of University admission or completion of semester 2. Three co-op work terms are required in Stream A and four are required in Stream B. Please check with CIS. Co-op faculty advisor for semester planning.

The course COOP*1100 must be successfully completed before the student may apply for a placement for the first work term (normally 2 semesters before the first work term).

Other sequences may not be viable for the co-op student. Please check with the CIS Co-op faculty advisor for semester planning. COOP*1000, COOP*2000, COOP*3000, and COOP*4000 represent the first, second, third, and fourth work terms respectively.

Conditions for graduation are the same as the corresponding regular B.Comp. Program. In addition, all work reports and performance evaluations must have a grade of satisfactory or better.

Work/Study Semesters

Stream A Co-Op Schedule of Studies

Semester 1(Fall)

CIS*1500	[0.50]	Introduction to Programming
MATH*1200	[0.50]	Calculus I

1.50 credits in the Area of Application or electives

Semester 2(Winter)

CIS*1910	[0.50]	Discrete Structures in Computing I
CIS*2500	[0.50]	Intermediate Programming
COOP*1100	[0.00]	Introduction to Co-operative Education

1.50 credits in the Area of Application or electives

Semester 3(Summer)

CIS*2030	[0.50]	Structure and Application of Microcomputers
CIS*2430	[0.50]	Object Oriented Programming
CIS*2520	[0.50]	Data Structures
CIS*2910	[0.50]	Discrete Structures in Computing II

0.50 credits in the Area of Application or electives

Fall Semester

COOP*1000 Work Term I

Semester 4(Winter)

CIS*2750	[0.75]	Software Systems Development and Integration
CIS*3110	[0.50]	Operating Systems
CIS*3490	[0.50]	The Analysis and Design of Computer Algorithms
STAT*2040	[0.50]	Statistics I

0.25 credits in the Area of Application or electives

Summer Semester

COOP*2000 Work Term 2

Semester 5(Fall)

CIS*2460	[0.50]	Modelling of Computer Systems
CIS*3530	[0.50]	Data Base Systems and Concepts
CIS*3750	[0.75]	System Analysis and Design in Applications

0.75 credits in the Area of Application or electives

Winter Semester

COOP*3000 Work Term 3

Semester 6(Summer)

Alternative 1 [Recommended]

CIS*3760	[0.75]	Software Engineering

0.50 C.I.S electives at the 3000 level or above
1.25 credits in the Area of Application or electives
OR Alternative 2
(1.50 C.I.S electives at the 3000 level or above
1.00 credits in the Area of Application or electives)

Semester 7(Fall)

1.00 credits in the Area of Application or electives
0.50 credits in C.I.S. at 3000 level or above
1.00 credits in C.I.S. at the 4000 level

Semester 8(Winter)

CIS*4000	[0.50]	Applications of Computing Seminar

1.50 credits in the Area of Application or electives
0.50 credits in C.I.S. at the 4000 level

The recommended schedule of studies for Co-op Stream B is as follows:

Semester 1(Fall)

CIS*1500	[0.50]	Introduction to Programming
MATH*1200	[0.50]	Calculus I

1.50 credits in the Area of Application or electives

Semester 2(Winter)

CIS*1910	[0.50]	Discrete Structures in Computing I
CIS*2500	[0.50]	Intermediate Programming
COOP*1100	[0.00]	Introduction to Co-operative Education

1.50 credits in the Area of Application or electives

Summer Semester Off

Semester 3(Fall)

CIS*2030	[0.50]	Structure and Application of Microcomputers
CIS*2430	[0.50]	Object Oriented Programming
CIS*2520	[0.50]	Data Structures
CIS*2910	[0.50]	Discrete Structures in Computing II

0.50 credits in the Area of Application or electives

Semester 4(Winter)

CIS*2750	[0.75]	Software Systems Development and Integration
CIS*3110	[0.50]	Operating Systems
CIS*3490	[0.50]	The Analysis and Design of Computer Algorithms
STAT*2040	[0.50]	Statistics I

0.25 credits in the Area of Application or elective

Summer Semester

COOP*1000 Work Term 1

Semester 5(Fall)

CIS*2460	[0.50]	Modelling of Computer Systems
CIS*3530	[0.50]	Data Base Systems and Concepts
CIS*3750	[0.75]	System Analysis and Design in Applications

0.75 credits in the Area of Application or electives
Note: CIS*3210 should be taken here to enable future courses in distributed computing.

Winter Semester

COOP*2000 Work Term 2

Semester 6(Summer)

Alternative 1 [Recommended]

CIS*3760	[0.75]	Software Engineering

0.50 C.I.S electives at the 3000 level or above
1.25 credits in the Area of Application or electives
OR Alternative 2
(1.50 C.I.S electives at the 3000 level or above
1.00 credits in the Area of Application or electives)

Fall Semester

COOP*3000 Work Term 3

Semester 7(Winter)

1.00 credits in the Area of Application or electives
0.50 credits in C.I.S. at 3000 level or above
1.00 credits in C.I.S. at the 4000 level

Summer Semester

COOP*4000 Work Term 4

Semester 8(Fall)

CIS*4000	[0.50]	Applications of Computing Seminar

1.50 credits in the Area of Application or electives
0.50 credits in C.I.S. at the 4000 level