University of
Lethbridge

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Program Planning Guide

Current and past Program Planning Guides are available on the
UofL website at www.uleth.ca/ross/ppgs/ppg.html

Calendar Year: 2012/2013

Faculty: Arts & Science

**About the Post-Diploma
Bachelor of Science (B.Sc.)
in Computer Science
Program**

This program is directed toward graduates of approved two-year college diploma programs in Computer System Technology or Computer Information Technology. Graduates of other diploma programs in these areas will also be considered.

**Approved Two-Year College
Diplomas**

At the time of printing (March 2012), the following two-year college diplomas are approved for admission:

**Algonquin College of Applied Arts
and Technology**
Computer Engineering Technology

Camosun College
Computer Systems Technology

Centennial College
Computer Programmer/Analyst *(three-year
diploma)*

Douglas College
Computer Information Systems

Durham College
Computer Systems Technology

**Georgian College of Applied Arts
and Technology**
 * Computer Programmer/Co-op
 * Computer Programmer/Analyst

 *College graduates must include in their diploma: CSC
2171, 2289 and 2298.*

Grande Prairie Regional College
Computer Systems Technology

Humber College
Computer Programmer
Computer Programmer Analyst
Computer Engineering Technology

Kwantlen Polytechnic University
Computer Information Systems

Lethbridge College
Computer Information Technology

Loyalist College
Computer Engineering Technician/Technology
Computer Programmer/Analyst

Medicine Hat College
Information Technology (Software and Internet
Development major)

**Northern Alberta Institute of
Technology (NAIT)**
Computer Systems Technology

Okanagan College
Computer Information Systems

Red Deer College
Computer Information Systems Technology

**Saskatchewan Institute of Applied
Science and Technology (SIAST)**
Computer Information Systems
Computer Systems Technology

**Sheridan Institute of Technology
and Advanced Learning**
Computer Science Technology

**Southern Alberta Institute of
Technology (SAIT)**
Information Technology (Software Development
major)

St. Lawrence College
Computer Networking and Technical Support
Computer Programmer Analyst

For a complete listing of approved diploma programs, including discontinued diplomas still acceptable for admission, see UofL's Post-Diploma Degree Programs website: www.uleth.ca/postdiploma

Co-operative Education	A Co-op option, requiring three work terms, is available. Students interested in the Co-operative Education/Internship program should contact the Coordinator of Co-operative Education in the Career Resources Centre (AH154 | phone: 403-382-7154) for further information.
Program Requirements	The post-diploma B.Sc. degree with a major in Computer Science requires 20 semester courses with a minimum cumulative grade point average of 2.00.
Residence Requirement	All 20 courses in the Post-Diploma program must be University of Lethbridge courses.

Program Worksheet

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General requirements:

Successful completion of at least 20 courses (as indicated below) with a cumulative grade point average of at least 2.00:

_____   1-8.   Completion of EIGHT courses from Lists I and II for the General Liberal Education Requirement as follows:

    _____   a. At least four courses from List I - Fine Arts and Humanities courses:

        1. _____

        2. _____

        3. _____

        4. _____

    and

    _____   b. At least four courses from List II - Social Science courses:

        1. _____

        2. _____

        3. _____

        4. _____

    and

    _____   c. At least one of the above eight courses must be at the 2000 level or higher.

        _____

    Note: *For complete Lists I, II, and III for the General Liberal Education Requirement see the 2012/2013 Calendar, Part 4, p. 91. List III: Science Courses will be satisfied via the major requirements listed below.*

_____   9-20.   12 courses for the Computer Science major, as listed below.

Requirements for the Computer Science Major:

A minimum of 12 courses, including 11 courses in Computer Science and one required cognate.

_____   1.   Computer Science 1820 - Discrete Structures

_____   2.   Computer Science 2720 - Practical Software Development

_____   3.   Computer Science 3615 - Computer Architecture

_____   4.   Computer Science 3620 - Data Structures and Algorithms

_____   5.   Computer Science 3740 - Programming Languages

_____ 6-11.   Six additional 3000/4000-level Computer Science courses, at least one of which must be a regularly offered 4000-level course (excluding Computer Science 4850 - Topics in Computer Science, Computer Science 4980 - Applied Studies, and Computer Science 4990 - Independent Study).

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____ (4000 level)

One of the additional 3000-level courses may be replaced by a course from the following list:

Physics 3900 - Intermediate Experimental Physics (Series) (Digital Electronics)

Any 3000/4000-level Mathematics course

Required cognate:

_____ 12.   Mathematics 2000 - Mathematical Concepts

Note: *Not more than eight courses may be taken at the 0100/1000 level for credit toward the degree. Language courses are offered in the 0100-1990 range. Only the first course in the range counts toward this limit in the language subjects of French, German, Greek, Japanese, Latin and Spanish. Only one of Economics 1010 and 1012 will be counted toward this limit. Only one of Biology 1010 and 1020 will be counted toward this limit. Only one of Geography 1000 and Geography 1200 will be counted toward this limit.*

Not more than two Independent Study courses may be taken for credit toward the degree.

Students may find that their diploma courses may overlap in content some course offerings in the Computer Science program. However, the offerings of the Department of Mathematics and Computer Science will often differ in focus and emphasis from diploma course offerings that bear superficially similar course descriptions. Students who have reservations about apparent duplication of offerings of Computer Science electives studied in their diploma programs are encouraged to pursue other elective offerings from the Department.

The curriculum for the post-diploma B.Sc. in Computer Science is designed to offer complementary training in Computer Science to students with previous technical training. In approving the college diploma, the Department is implicitly acknowledging that students have completed the equivalent of Computer Science 1620, Computer Science 2610, and Computer Science 2620 as part of their diploma program.

Students will be expected to have a working knowledge of the programming languages used by the Department in the delivery of Computer Science 1620 and Computer Science 2620. A student without this background will be expected to remedy any programming language deficiencies.

Sample Sequencing Plan

Shown below is a sample sequence of courses for your degree. If you follow this plan, you should be able to graduate in two years, provided you complete five courses per semester. This is just one example of how you could complete your major and degree requirements; you may find that a different sequence works as well as this one.

Year 1, Fall	*Year 1, Spring*
Computer Science 1820	Computer Science 3615
Computer Science 2720	Computer Science 3620
Computer Science 3000 level	Computer Science 3000 level
GLER course (List I)	Mathematics 2000 *(required cognate)*
GLER course (List II)	GLER course (List I)
Year 2, Fall	*Year 2, Spring*
Computer Science 3740	Computer Science 4000 level
Computer Science 3000/4000 level	Computer Science 3000/4000 level
Computer Science 3000/4000 level	GLER course (List I)
GLER course (List I)	GLER course (List II)
GLER course (List II)	GLER course (List II)

Note: *The required Mathematics cognate should be taken as early as possible (in Year One, if course scheduling permits), to derive maximum benefit from the course for the remainder of the program.*

Terms Used

GLER course: A course that could count toward the General Liberal Education Requirement. You may use courses in your major towards this 12-course requirement. See the 2012/2013 University of Lethbridge Calendar, Part 4 - Academic Regulations (p. 91) for complete information.

Elective: A course that you may choose freely from all those available and applicable to your program. Use courses inside or outside your major, bearing in mind any restrictions that may apply (e.g., a maximum of 20 courses from any one department).

Cognate: A course from a related discipline deemed to complement the chosen area of study and to encompass knowledge and skills essential to that area.

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