



## Program Planning Guide

Current and past Program Planning Guides are available on the UofL website at [www.uleth.ca/ross/ppgs/ppg.html](http://www.uleth.ca/ross/ppgs/ppg.html)

Calendar Year: 2010/2011

Faculty: Arts & Science

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

The Post-Diploma Bachelor of Science (B.Sc.) in Computer Science 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 2010), the following two-year college diplomas have been approved:

**Algonquin College of Applied Arts and Technology**

Computer Engineering Technology

**Camosun College**

Computer Systems Technology

**Centennial College**

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

**Century College of Art and Business**

E-Business Information Technology (*formerly E-Commerce Information Technology*) (*prior to 2006*)

**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

**Keyano College**

Computer Information Systems

**Kwantlen Polytechnic University**

Computer Information Systems

**Lakeland College**

Computer Systems Technology (*prior to 2007*)

**Lethbridge College**

Computer Information Technology

**Loyalist College**

Computer Engineering Technician/Technology  
Computer Programmer/Analyst

**Medicine Hat College**

Computer Systems Technology (*prior to 2003*)  
Information Technology (*Programming major*)

**Mount Royal University**

Computer Information Systems (*prior to 2007*)

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

Computer Systems Technology

**Okanagan College**

Computer Information Systems

**Red Deer College**

Computer 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)**

Computer Technology

**St. Lawrence College**

Computer Networking and Technical Support  
Computer Programmer Analyst

For a complete listing of approved diploma programs, see UofL's Post-Diploma Degree Programs website: [www.uleth.ca/postdiploma](http://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 (B610 | phone: 403-382-7154) for further information.

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**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.

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**Residence Requirement** All 20 courses in the Post-Diploma program must be University of Lethbridge courses.

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**Program Worksheet**

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**Name :** \_\_\_\_\_ **ID :** \_\_\_\_\_

**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 2010/2011 Calendar, Part 4, p. 85. 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.

<p><b>Year 1, Fall</b></p> <p>Computer Science 1820                  Computer Science 2720                  Computer Science 3000 level                  GLER course (List I)                  GLER course (List II)</p> <p><b>Year 2, Fall</b></p> <p>Computer Science 3740                  Computer Science 3000/4000 level                  Computer Science 3000/4000 level                  GLER course (List I)                  GLER course (List II)</p>	<p><b>Year 1, Spring</b></p> <p>Computer Science 3615                  Computer Science 3620                  Computer Science 3000 level                  Mathematics 2000 (<i>required cognate</i>)                  GLER course (List I)</p> <p><b>Year 2, Spring</b></p> <p>Computer Science 4000 level                  Computer Science 3000/4000 level                  GLER course (List I)                  GLER course (List II)                  GLER course (List II)</p>
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*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 2010/2011 University of Lethbridge Calendar, Part 4 - Academic Regulations (p. 85) 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.



**[www.ulethbridge.ca](http://www.ulethbridge.ca)**

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