

May 28, 2009

**Subject: Revision to the letter of May 1 concerning Curriculum Changes in the 2009-2010 Calendar**

The letter you received on May 1 has been revised as follows. In essence, the revision states that you do not need to take SOEN 287 if you have already completed SOEN 229. Your SOEN 229 course will be considered as having fulfilled the academic requirement for SOEN 287. The revised letter follows:

Dear Student,

Each May, all students enrolled in the **Software Engineering** program are mailed a letter advising them of curriculum changes that have occurred since their entry into the program. This letter, included past ones, can also be viewed at the following address for your convenience: [http://www.encs.concordia.ca/scs/content/Sequences\\_SOEN.htm](http://www.encs.concordia.ca/scs/content/Sequences_SOEN.htm).

This letter is to advise you of any additional changes that will appear in the 2009-2010 Calendar which may affect your selection of courses. Should you have any questions regarding this issue, please do not hesitate to contact Student Academic Services at (514) 848-2424, extension 3055.

You can view the program requirements and course descriptions at the following website: [http://registrar.concordia.ca/calendar/pdf/calendar\\_pdf.html](http://registrar.concordia.ca/calendar/pdf/calendar_pdf.html)

**VERY IMPORTANT: Students must have completed all 200-level courses required from their program before they can register for any 400-level course.**

Students registered in the Software Engineering program must complete a minimum of 120 credits during four years of full-time study. The program consists of the Engineering Core, Software Engineering Core, and Elective Group.

**1. Changes to the Engineering Core**

There are no changes in the Engineering Core for Software Engineering students.

## **2. Changes to the Software Engineering Core**

COMP 238 (3 credits) *Mathematics for Computer Science I* has been **renamed** COMP 232 (3 credits) *Mathematics for Computer Science*.

COMP 239 (3 credits) *Mathematics for Computer Science II* is **no longer** part of the Software Engineering Program. *As a transitional measure students who have completed COMP 239 prior to September 2009 may use COMP 239 to reduce the total number of technical electives. This transitional measure may be rescinded after June 2014.*

COMP 348 (3 credits) Principles of Programming Languages has been **taken out** from the Software Engineering Technical Electives and **moved** to the Software Engineering core. *As a transitional measure, students who graduate by June 2010 may graduate without this requirement.*

COMP 353 (3 credits) Databases has been **taken out** of the Software Engineering Core and **moved** to the Software Engineering Technical Elective List. *Students are no longer required to use this course as a Software Core requirement.*

COMP 445 (3 credits) Data Communication and Computer Networks has been **taken out** of the Software Engineering Core and **moved** to the Software Engineering Technical Electives List. *Students are no longer required to use this course as a Software Core requirement.*

SOEN 321 (3 credits) Information Systems Security has been **taken out** of the Software Engineering Core and **moved** to the Software Engineering Technical List. *Students are no longer required to use this course as a Software core requirement.*

SOEN 229 (3 credits) System Software *is no longer part of the Software Engineering program. Students who have completed SOEN 229 prior to May 2009 shall use SOEN 229 in place of SOEN 287. This transitional measure may be rescinded after June 2014.*

SOEN 287 (3 credits) Introduction to Web Applications has been added to the Software Engineering core. *As a transitional measure, students who have completed SOEN 229 will be exempted from this course.*

Note: Students who have taken SOEN 343 and 344 prior to May 2009 should not take SOEN 287 and SOEN 387 for credit. In situations where SOEN 287 and/ or SOEN 387 is a prerequisite a waiver can be granted.

*These transitional measures may be rescinded after June 2014.*

SOEN 337 (3credits) Measurement in Software Development *is no longer part of the Software Engineering program. Students who have completed SOEN 337 prior to May 2009 may use SOEN 337 to reduce the total number of technical elective. This transitional measure may be rescinded after June 2014.*

SOEN 345 (3 credits) Software Testing, Verification and Quality Control has been added to the Software Engineering Core. *As a Transitional measure, students who graduate by June 2010 may graduate without this requirement.*

### **3. A Computer Science Group has been added to the Software Engineering Core.**

#### **Computer Science Group**

*Students must complete all course in the Computer Science Group below:*

COMP 232 Mathematics for Computer Science (3 credits)  
COMP 248 Object-oriented Programming I (3 credits)  
COMP 249 Object-oriented Programming II (3 credits)  
COMP 335 Introduction to Theoretical Computer Science (3 credits)  
COMP 346 Operating Systems (4 credits)  
COMP 348 Principles of Programming Languages (3 credits)  
COMP 352 Data Structures and Algorithms (3 credits)

### **4. Basic Science Courses**

There are no changes to the Basic Science Courses

### **5. Technical Elective Groups**

The total length of the program is **120 credits**. Students must take sufficient technical electives to obtain that total number of program credits.

#### **Students must complete at least one of the following courses listed below:**

- (a) COMP 376 (4 credits)  
or
- (b) SOEN 387 (3 credits)  
or
- (c) COMP 327 (4 credits) and COEN 317 (4 credits).

*As a transitional measure students who graduate by June 2010 may graduate without this requirement.*

#### **Courses listed below are in groups to facilitate course selection:**

##### **Computer Games (CG) Subgroup**

COMP 345 Advanced Program Design with C++ (3 credits)  
COMP 371 Computer Graphics (4 credits)  
COMP 376 Introduction to Game Development (4 credits)  
COMP 472 Artificial Intelligence (4 credits)  
COMP 476 Advanced Game Development (4 credits)  
COMP 477 Animation for Computer Games (4 credits)

## **Web Services and Applications (WSA) Subgroup**

COMP 353 Databases  
COMP 445 Data Communication and Computer Networks (4 credits)  
COMP 479 Information Retrieval and Web Search ( 4 credits)  
SOEN 321 Information Systems Security ( 3 credits)  
SOEN 387 Web-Based Enterprise Application Design (3 credits)  
SOEN 487 Web Services and Applications (4 credits)

## **Real-Time and Embedded Software (RES) Subgroup**

COEN 317 Microprocessor Systems (4 credits)  
COEN 320 Introduction to Real-Time Systems (3 credits)  
COEN 421 Embedded Systems and Software Design (4 credits)  
COMP 327 Digital System Design (4 credits)  
COMP 345 Advanced Program Design with C++ (3 credits)

## **Other Electives**

COMP 426 Multicore Programming (4 credits)  
COMP 428 Parallel Programming (4 credits)  
COMP 442 Compiler Design (4 credits)  
COMP 444 System Software Design (4 credits)  
COMP 451 Database Design (4 credits)  
COMP 465 Design and Analysis of Algorithms (3 credits)  
COMP 473 Pattern Recognition (4 credits)  
COMP 474 Intelligent Systems (4 credits)  
COMP 478 Image processing (4 credits)  
SOEN 423 Distributed Systems (4 credits)  
SOEN 431 Formal Methods (3 credits)  
SOEN 448 Management of Evolving Systems (3 credits)  
ENGR 411 Special Technical Report (1 credit)

## **Writing Skills Requirement:**

All students must meet the Writing Skills Requirement before completing 30 credits. Your student record will indicate if you have already met this requirement. In the past, this requirement was met by either passing the University Writing Test or by taking a sequence of English or French Courses. This is no longer the case.

Students in Engineering and Computer Science may now meet the Writing Skills Requirement by both obtaining a grade of C- in ENCS 272 *Composition and Argumentation for Engineers*, or by writing and obtaining C- in a challenge exam (EWT) for this course. **Note that ENCS 272 will generally not be counted towards a student's engineering degree.**

For further information on ENCS 272 and its challenge exam, please visit <http://www.encs.concordia.ca/scs/content/EDCT.htm>.