

REPORT OF ACADEMIC STANDARDS COMMITTEE

Report #F2012–2; November 2012

In this report the Academic Standards Committee (ASC) brings to Senate its evaluation and recommendation on a number of items.

- A new Minor in French from the Department of Languages, Literatures and Cultures
- A new Minor in Spanish from the Department of Languages, Literatures and Cultures
- A new Minor in Health Service Management from the School of Health Service Management
- Curriculum Modifications to the BSc program in Mathematics and its Applications from the Department of Mathematics
- Curriculum Modifications to the BSc program in Financial Mathematics from the Department of Mathematics
- Curriculum Modification and Academic Standing Variation to the Bachelor of Health Sciences program in Midwifery
- Curriculum Modifications to the Minor in Chemistry from the Department of Chemistry and Biology

A. MINOR IN FRENCH

Proposal: The Department of Languages, Literatures and Cultures is proposing a new six-course Minor in French. The Minor in French would be most easily obtained by students who already have four (4) French courses as part of their professional or professionally-related course tables.

Rationale for the Minor: The current economic climate is putting increasing pressure on recent Ryerson graduates, who must demonstrate that their degrees set them apart from other graduates. The career-oriented nature of Ryerson's degrees coupled with the added value of a minor in French would be a step forward in providing students with that edge. The possibility of achieving minors in languages will also act as an incentive for students to persevere in their language studies, which in turn will have a positive effect on enrollment in more advanced courses. In a knowledge-based economy, bilingualism, or even plurilingualism, is an invaluable asset. To promote the study of French among English-speaking students, the Department believes that it must stimulate interest and enthusiasm in the student population. Helping students to view bilingualism not as an academic requirement, or a matter of national duty, but instead as an open window on a different world and a passport to a more fulfilling professional and personal life is the challenge the Department has been meeting for many years.

Structure of the proposed Minor: The Minor in French consists of a minimum of two (2) courses chosen from Group A and a maximum of four (4) course chosen from Group B. All courses are available in the Department of Languages, Literatures and Cultures.

Consistency with the Ryerson policy on Minors: The minor is consistent with Policy 148.

Curriculum: The proposed curriculum is presented below.

A minimum of two (2) courses from Group A:

FRE 402 French Conversation and Pronunciation

FRE 502 Advanced Business French I

FRE 515 Introduction to Business French

FRE 602 Advanced Business French II

FRE 701 French in the Media I

FRE 801 French in the Media II

A maximum of four (4) courses from Group B:

FRE 301 Intermediate French I

FRE 605 Language and Culture II

FRE 401 Intermediate French II

FRE 608 Introduction to 20th Century French Literature II

FRE 501 Speaking and Writing French I

FRE 609 Franco-Canadian Literature II

FRE 601 Speaking and Writing French II

FRE 703 French Theatre: Classicism to Romanticism

FRE 507 English-French Translation I

FRE 704 Introduction to Franco-Canadian Culture I

FRE 510 Effective Writing I

FRE 706 Cultural Evolution of the French Language

FRE 607 English-French Translation II

FRE 709 Children's Literature in French

FRE 610 Effective Writing II

FRE 803 French Theatre: 20th Century and Contemporary

FRE 707 Introduction to French-English Translation

FRE 804 Introduction to Franco-Canadian Culture II

FRE 505 Language and Culture I

FRE 900 Senior French Seminar

FRE 508 Introduction to 20th Century French Literature I

FRE 901 Francophone Women Writers

FRE 509 Franco-Canadian Literature I

FRE 903 The Francophone Short Story

Recommendation: Having satisfied itself of the merit of this proposal, ASC recommends: *That Senate approve the proposed new Minor in French.*

B. MINOR IN SPANISH

Proposal: The Department of Languages, Literatures and Cultures is proposing a new six-course Minor in Spanish. The Minor in Spanish would be most easily obtained by students who already have four (4) Spanish courses as part of their professional or professionally-related course tables.

Rationale for the Minor: The current economic climate is putting increasing pressure on recent Ryerson graduates, who must demonstrate that their degrees set them apart from other graduates. The career-oriented nature of Ryerson's degrees coupled with the added value of a minor in Spanish would be a step forward in providing students with that edge. The possibility of achieving minors in languages will also act as an incentive for students to persevere in their language studies, which in turn will have a positive effect on enrollment in more advanced courses. In a knowledge-based economy, bilingualism, or even plurilingualism, is an invaluable asset. To promote the study of Spanish among English-speaking students, the Department believes that it must stimulate interest and enthusiasm in the student population. Helping students to view bilingualism not as an academic requirement, but instead as an open window on a different world and a passport to a more fulfilling professional and personal life is the challenge the Department has been meeting for many years.

Structure of the proposed Minor: The Minor in Spanish consists of a minimum of two (2) courses chosen from Group A and a maximum of four (4) courses chosen from Group B. All courses are available in the Department of Languages, Literatures and Cultures.

Consistency with the Ryerson policy on Minors: The minor is consistent with Policy 148.

Curriculum: The proposed curriculum is presented below.

A minimum of two (2) courses from Group A:

SPN 402 Spanish Conversation and Pronunciation

SPN 515 Introduction to Business Spanish

SPN 702 Advanced Business Spanish I

SPN 802 Advanced Business Spanish II

A maximum of four (4) courses from Group B:

SPN 301 Intermediate Spanish I

SPN 401 Intermediate Spanish II

SPN 501 Advanced Spanish I

SPN 601 Advanced Spanish II

SPN 704 Introduction to Latin American Culture I

SPN 708 Contemporary Spanish Fiction

SPN 710 Spanish of Spain and Latin America

SPN 803 Latin American Short Story

SPN 804 Introduction to Latin American Culture II

Recommendation: Having satisfied itself of the merit of this proposal, ASC recommends: *That Senate approve the proposed new Minor in Spanish.*

C. MINOR IN HEALTH SERVICES MANAGEMENT (HSM)

Proposal: The School of Health Services Management is proposing the creation of a six-course Minor in Health Services Management. The HSM Minor would be available to students in the Ted Rogers School of Information Technology Management and the Ted Rogers School of Hospitality and Tourism Management.

Rationale: With constant changes in the health care industry, individuals are hired with a range of academic preparation. Employment candidates from non-clinical/technical health disciplines often lack the healthcare context in their academic preparation. The HSM Minor will help fill this gap. The Minor will also be useful to individuals who already possess academic preparation in the clinical/technical disciplines of health care but who may be lacking in specific areas such as the Long Term Care environment, Retirement Homes Management, Community Care Access Centres and Local Health Integration Networks.

Structure of the Minor: The Minor will consist of 6 courses with 2 required courses in Group A and 4 in Group B; the latter selected from a list of electives. Most of the courses are from the School of Health Services Management the (1 course is a Liberal Study). The proposed courses for the Minor currently exist.

Consistency with the Ryerson policy on Minors: The minor is consistent with Policy 148.

Curriculum: Courses are split into two groups, A and B. Students must take both courses in Group A, and choose an additional 4 courses from Group B.

Group A (Both course are required to complete the Minor)

| COURSE | SEMESTER OFFERING |
|----------------------------------|----------------------|
| HSM 301: The Healthcare Systems | Fall, Winter, Spring |
| HSM 326: Law for Health Managers | Fall, Winter |

Group B (Select four courses from this list)

| COURSE | SEMESTER OFFERING |
|--|----------------------|
| HIM 301: Healthcare Information Analysis | Fall, Winter |
| HSM 307: Principles of Long Term Care Service Delivery | Fall, Winter, Spring |

| | |
|--|----------------------|
| HSM 308: Project Management in Long Term Care | Spring |
| HSM 309: Trends in Long Term Care Service Delivery | Spring |
| HSM 310: Institutional Structure | Spring |
| HSM 437: Human Resource Management in Healthcare | Winter |
| (C)MHR 523: Human Resources Management | Fall, Winter, Spring |
| HIM 404: Health Economics | Fall |
| PHL 509: Bioethics (Upper Level Liberal Study) | Spring |
| PHL 302: Ethics and Health Care | Fall, Winter, Spring |

Statement on Diversity, Equity and Inclusivity: Given the diversity of clients seeking assistance from the health system, it is imperative that the HSM Minor curriculum addresses the areas of diversity, inclusivity and equity. While many of the courses listed in the HSM Minor have these issues embedded within the course structure, the following courses speak directly to the issues of diversity, equity and inclusivity: HSM 301 (The Healthcare Systems); HSM 437 (Human Resources Management in Healthcare); HSM 326 (Law for Health Managers); CHIM 404 (Health Economics).

Recommendation: Having satisfied itself of the merit of this proposal, ASC recommends: *That Senate approve the proposed new Minor in Health Services Management.*

D. CURRICULUM MODIFICATIONS TO THE BSC IN MATHEMATICS AND ITS APPLICATIONS (MIA)

Proposal: The most significant of the proposed changes apply to the first-year of the MIA program. A more modest change is also proposed for Semester 3 of the program. The proposal has two elements: (i) to reduce the number of lab-science courses in the program and replace them with mathematics required and elective courses; and (ii) to strengthen the rigour of the mathematics foundations courses taken by mathematics majors. With this proposal, mathematics and computer science students would have the same mathematics requirements in the first year.

Rationale: The purpose of the proposed changes is to improve the academic rigour of the program and to improve student retention. It has been a challenge to the integrity of the program since its inception having MIA students take six lab-science courses (biology, chemistry and physics) along with taking first year mathematics courses designed for biology, chemistry and physics majors rather than for mathematics majors. As well, the recently-approved BSc program in Financial Mathematics program does not share a common first year with the other science programs. It is proposed that the MIA first year mathematics courses would be MTH207/310 (Calculus and Computational Methods I and II) which

are existing courses offered to first year computer science students. MIA students have the same admission requirements as Computer Science students so there is no academic impediment to their taking MTH207/MTH310 in their first year. Presently students take electives from Professional Tables I, II and III as well as professional related courses from Table IV. Tables I/II/III, included below, would be core elective tables in the new curriculum model and all mathematics students would take four such courses depending on their chosen concentration (Regular Program, Computer Science Concentration, Economics Concentration). Table IV is a professionally related electives table and is not included in this proposal. This is in keeping with the new curriculum framework.

Migration between Programs: A MIA student could conceivably transfer to Financial Mathematics in phase at the beginning of second year. Any courses taken by a MIA student during the first year that are not required for the Financial Mathematics program (e.g., MTH 110/210) can be counted as electives. ACC 100 and FIN 300 are prerequisites for courses taken during the second year of the Financial Mathematics program. Students could take these two courses in the spring and summer, when they are available. Students migrating from the Financial Mathematics program to the proposed modified MIA program would be missing MTH110 and MTH 210. How these are made up depends on which concentration the MIA student selects: Regular, Computer Science or Economics. Students who successfully complete a first year of engineering would receive a fair amount of credit for the work they have already completed. Conceivably, engineering students transferring to MIA could be in phase by the beginning of their fourth year. For science students transferring into MIA to remain fairly in phase they would need to take MTH 310 in the spring transition term. Computer Science and the modified MIA also have substantial overlap in the first year, sharing 70% of their courses.

Current and Proposed Curricula: The first year lab-science requirement for mathematics students would be *only one of* the three lab-science course pairs: Biology (BLG143/144) *or* Chemistry (CHY103/113) *or* Physics (PCS120/130). Presently, math students take all six of these courses. Four of the lab-science courses would be replaced by a new sequence of math courses, MTH110/210 (Discrete Mathematics I/II), an additional Liberal Studies course and one (professionally related) elective. MTH110/210 are presently second year courses. Further, the current first-year sequence MTH131/231 (Modern Mathematics I and II) is aimed at science majors and does not serve mathematics majors well. This is to be replaced by the sequence MTH207/310 (Calculus and Computational Methods I and II) which are more rigorous. Finally, MTH108 (Linear Algebra) is included in semester 3 to fill a gap in the current curriculum.

| | | | | | |
|--|--|-----------------|------------|--|--|
| | | Current Program | | | |
| | | Common | | | |
| | | SEMESTER 1 | SEMESTER 2 | | |
| | | MTH 131 | MTH 231 | | |
| | | BLG 143 | BLG 144 | | |
| | | CHY 103 | CHY 113 | | |
| | | PCS 120 | PCS 130 | | |
| | | CPS 118 | Liberal | | |
| | | SCI 180 | | | |

Years 2-4 as currently offered

| Regular Program | | Computer Science | | Economics | |
|-----------------|---------------|------------------|------------|------------|------------|
| SEMESTER 3 | SEMESTER 4 | SEMESTER 3 | SEMESTER 4 | SEMESTER 3 | SEMESTER 4 |
| CPS 313 | CPS 411 | CPS 109 | CPS 209 | ECN 104 | ECN 204 |
| MTH 110 | MTH 210 | MTH 110 | MTH 210 | MTH 110 | MTH 210 |
| MTH 330 | MTH430 | MTH 330 | MTH 430 | MTH 330 | MTH 430 |
| MTH 380 | MTH 480 | MTH 380 | MTH 480 | MTH 380 | MTH 480 |
| Liberal | Table I or IV | Liberal | CPS 393 | Liberal | Table I |
| SEMESTER 5 | SEMESTER 6 | SEMESTER 5 | SEMESTER 6 | SEMESTER 5 | SEMESTER 6 |
| MTH 501 | MTH 640 | CPS 305 | MTH 640 | MTH 501 | MTH 640 |
| MTH 719 | Table I | MTH 501 | Table II | MTH 719 | Table I |
| Table I | Table IV | MTH 719 | Table II | ECN 301 | Table III |
| Table IV | CMN 600 | Table I | CMN 600 | ECN 504 | CMN 600 |
| Liberal | Liberal | Liberal | Liberal | Liberal | Liberal |
| SEMESTER 7 | SEMESTER 8 | SEMESTER 7 | SEMESTER 8 | SEMESTER 7 | SEMESTER 8 |
| MTH 525 | MTH 617 | MTH 525 | MTH 617 | MTH 525 | MTH 617 |
| Table I | Table I | Table I | Table I | Table III | Table I |
| Table IV | Table IV | Table II | Table II | Table III | Table III |
| Table IV | Table IV | Table II | Table II | Table III | Table III |
| Liberal | Liberal | Liberal | Liberal | Liberal | Liberal |

| Proposed Program | | | | | |
|------------------------|------------|------------------|------------|------------|------------|
| Common | | | | | |
| SEMESTER 1 | | SEMESTER 2 | | | |
| MTH 207 | | MTH 310 | | | |
| MTH 110 | | MTH 210 | | | |
| Science I | | Science II | | | |
| CPS 118 | | Elective | | | |
| Liberal | | Liberal | | | |
| SCI 180 | | | | | |
| Years 2--4 as proposed | | | | | |
| Regular Program | | Computer Science | | Economics | |
| SEMESTER 3 | SEMESTER 4 | SEMESTER 3 | SEMESTER 4 | SEMESTER 3 | SEMESTER 4 |
| MTH 108 | CMN 600 | CPS 109 | CPS 209 | ECN 104 | ECN 204 |
| MTH 330 | MTH430 | MTH 108 | CMN 600 | MTH 108 | CMN 600 |
| MTH 304 | MTH 404 | MTH 330 | MTH 430 | MTH 330 | MTH 430 |
| Elective | Elective | MTH 304 | MTH 404 | MTH 304 | MTH 404 |
| Elective | Liberal | Liberal | CPS 393 | Liberal | Table I |
| SEMESTER 5 | SEMESTER 6 | SEMESTER 5 | SEMESTER 6 | SEMESTER 5 | SEMESTER 6 |
| MTH 501 | MTH 719 | MTH 501 | MTH 719 | MTH 501 | MTH 719 |
| MTH 640 | Table I | MTH 640 | Table II | MTH 640 | Table I |
| Table I | Table I | CPS 305 | Table II | ECN 301 | Table III |
| Elective | Elective | Table I | Table I | ECN 504 | Table III |
| Liberal | Liberal | Liberal | Liberal | Liberal | Liberal |
| SEMESTER 7 | SEMESTER 8 | SEMESTER 7 | SEMESTER 8 | SEMESTER 7 | SEMESTER 8 |
| MTH 525 | MTH 617 | MTH 525 | MTH 617 | MTH 525 | MTH 617 |
| Table I | Table I | Table I | Table I | Table I | Table I |
| Table I | Elective | Table II | Table II | Table III | Table III |
| Elective | Elective | Table II | Table II | Table III | Table III |
| Liberal | Elective | Liberal | Elective | Liberal | Elective |

Note that the sequence Science I/Science II must be one of the pairs Biology (BLG143/144) or Chemistry (CHY103/113) or Physics (PCS120/130).

| PROFESSIONAL TABLE I | PROFESSIONAL TABLE II Computer Science Option | PROFESSIONAL TABLE III Economics Option |
|---|--|--|
| <p>A total of six single-term courses</p> <p>MTH 40A/B* Project-Thesis</p> <p>MATH 460 Problem Solving</p> <p>MTH 500 Introduction to Stochastic Processes</p> <p>MTH 503 Operations Research I</p> <p>MTH 540 Geometry</p> <p>MTH 600 Computational Methods</p> <p>MTH 601 Numerical Analysis II</p> <p>MTH 603 Operations Research II</p> <p>MTH 607 Graph Theory</p> <p>MTH 609 Number Theory</p> <p>MTH 630 Mathematical Biology</p> <p>MTH 700 Financial Mathematics I</p> <p>MTH 707 Modelling and Searching Networks</p> <p>MTH 710 Fourier Analysis</p> <p>MTH 712 Differential Equations II</p> <p>MTH 714 Logic and Computability</p> <p>MTH 718 Design and Codes</p> <p>MTH 732 Introduction to Fluid Dynamics</p> <p>MTH 800 Financial Mathematics II</p> <p>MTH 814 Computational Complexity</p> <p>MTH 816 Cryptography</p> <p>MTH 817 Combinatorics</p> <p>MTH 818 Topics in Algebra</p> <p>MTH 820 Image Analysis</p> <p>MTH 825 Topics in Analysis</p> <p>PCS 350 Computational Methods in Medical Physics</p> <p>* A multi-term course, equivalent to two single-term courses</p> | <p>A total of six single-term courses is required, as noted below</p> <p>CPS 213 Computer Organization I</p> <p>CPS 310 Computer Organization II</p> <p>CPS 311 Object Oriented Programming and Design</p> <p>CPS 406 Introduction to Software Engineering</p> <p>CPS 506 Comparative Programming Languages</p> <p>CPS 509 Control Systems</p> <p>CPS 510 Database Systems I</p> <p>CPS 511 Computer Graphics</p> <p>CPS 530 Component-Based Programming for the Web</p> <p>CPS 590 Introduction to Operation Systems</p> <p>CPS 606 Advanced Computer Organization</p> <p>CPS 607 Autonomous Mobile Robotics</p> <p>CPS 610 * Database Systems II</p> <p>CPS 613 Human Computer Interaction</p> <p>CPS 615 Theory of Parsing</p> <p>CPS 616 Advanced Algorithms</p> <p>CPS 621 Introduction to Multimedia Systems</p> <p>CPS 630 *Web Applications</p> <p>CPS 633 *Computer Security</p> <p>CPS 706 *Introduction to Data Communications</p> <p>CPS 707 *Software Verification and Validation</p> <p>CPS 710 *Compilers and Interpreters</p> <p>CPS 713 Applied Cryptography</p> <p>CPS 714 *Software Project Management</p> <p>CPS 716 * Computer Networks II</p> <p>CPS 721 Artificial Intelligence I</p> | <p>A total of six single-term courses is required, as noted below</p> <p>ECN 220 Evolution of the Global Economy</p> <p>ECN 320 Introduction to Financial Economics</p> <p>ECN 321 Introduction to Law and Economics</p> <p>ECN 330 Economic Systems in the New World Economy</p> <p>ECN 501 Industrial Organization</p> <p>ECN 502 Economics of Natural Resources</p> <p>ECN 506 Money and Banking</p> <p>ECN 510 Environmental Economics</p> <p>ECN 600 * Intermediate Macroeconomics II</p> <p>ECN 601 The Economics of Information</p> <p>ECN 605 Labour Economics</p> <p>ECN 606 International Monetary Economics</p> <p>ECN 614 * An Introduction to Game Theory</p> <p>ECN 627 * Econometrics I</p> <p>ECN 640 The Economics of Immigration</p> <p>ECN 700 * Intermediate Microeconomics II</p> <p>ECN 702 * Econometrics II</p> <p>ECN 703 Public Finance</p> <p>ECN 707 Economics of International Trade</p> <p>ECN 715 * Advanced Microeconomics</p> <p>ECN 721 International Financial Markets</p> <p>ECN 803 Public Finance II</p> <p>ECN 815 * Advanced Macroeconomics</p> <p>FIN 401 Managerial Finance II</p> <p>FIN 501 * Investment Analysis</p> <p>* A minimum of two courses designated with an asterisk must be taken.</p> |

| | | |
|--|--|--|
| | CPS 730 *Web Technology and Performance Measurement CPS 731 *Software Engineering I CPS 750 *Telecomm Networks: Wireless Systems CPS 752 *Parallel Computer Systems CPS 801 *Operating Systems CPS 811 *Distributed Systems and Networks CPS 813 *Human Robot Interaction CPS 815 *Analysis of Algorithms CPS 831 *Software Engineering II CPS 832 *Mainframe Systems CPS 840 *Selected Topics in Computer Science CPS 841 *Advanced Topics in Computer Science CPS 842 Information Retrieval and Web Search CPS 843 Digital Image Computing CPS 844 Data Mining CPS 845 *Extreme Programming and Agile Processes * A minimum of two courses designated with an asterisk must be taken | |
|--|--|--|

Recommendation: Having satisfied itself of the merit of this proposal, ASC recommends: *That Senate approve the proposed curriculum modifications to the BSc program in Mathematics and its Applications.*

F. CURRICULUM MODIFICATIONS TO THE BSC IN FINANCIAL MATHEMATICS

Purpose of the Proposed Curriculum Modification: To align the mathematics courses in the first three semesters of the BSc (Financial Mathematics) with those in the modified BSc (Mathematics and its Applications) program noted above.

Proposed Changes: The first and second semester courses MTH131 and MTH231 are to be replaced by MTH 207 and MTH 310 respectively thereby substituting a weaker sequence of first year calculus courses with a stronger series. This will keep the Financial Mathematics program in sync with the Mathematics and Its Applications program. Both programs have the same admission requirements. The third semester course MTH3XX (Modern Mathematics III) in the BSc (Financial Mathematics) is to be replaced by MTH 108 (Linear Algebra). The original purpose of MTH3XX was to bridge the material that students

do not learn in MTH131/231 (Modern Mathematics I and II) and to cover material that Financial Mathematics students would miss by not taking MTH 108.

Recommendation: Having satisfied itself of the merit of this proposal, ASC recommends: *That Senate approve the proposed curriculum modifications to the BSc program in Financial Mathematics.*

F. CURRICULUM MODIFICATIONS TO THE BACHELOR OF HEALTH SCIENCE (MIDWIDERY) PROGRAM

Proposal: The course MWF 108 (Aboriginal Childbearing) is currently a Year 1, Semester 2 Professionally-Related elective. The program is proposing that it be re-purposed as a Year 1, Semester 2 Required course. This change is to be implemented in the 2013-14 academic year. In addition, it is proposed that this course will become part of the program's academic standing variation. That is, students will be required to achieve a grade of at least C- in the course in order to be eligible for promotion to Year 2 of the program. Note that the change would also facilitate degree completion for students who may have previously taken an aboriginal studies course.

Rationale: The rationale for the proposed changes relates to the view that it is appropriate for all undergraduate students in Canada to take an Aboriginal/Indigenous studies course as a required part of any degree. For students preparing to become health professionals, the completion of such a course is even more imperative. Indigenous communities in Canada have always had strong and meaningful midwifery and birthing cultures from which all students have much to learn. In this course, students have the opportunity to understand the impacts of colonization, while exploring the traditions and importance of birth within various Aboriginal/Indigenous communities.

Recommendation: Having satisfied itself of the merit of this proposal, ASC recommends: *That Senate approve the proposed modifications to the Bachelor of Health Science (Midwifery) program.*

G. CURRICULUM MODIFICATIONS TO THE MINOR IN CHEMISTRY

Proposal: The Chemistry program is proposing changes to the existing Chemistry Minor to make it more accessible to students. Currently the Minor is, *de facto*, an eight-course curriculum as it has two pre-requisite courses which are external to the Minor: these are the two first year general chemistry courses CHY103 and CHY113. The proposed changes include using these two first year chemistry courses as the required courses in the minor and expanding the selection of elective courses, of which students will choose four. None of the courses in the Minor is a new course. The revised curriculum is consistent with the Senate Policy on Minors (Policy 148).

Curriculum:*Calendar Text for the Existing Chemistry Minor*

To receive the Minor, a student must complete six courses from the following course of study:

CHY 213 CHY 330 CHY 381

Three of the following:

CHY 223 CHY 434 CHY 445

CHY 344 CHY 435 CHY 449

CHY 423 CHY 436 CHY 706

CHY 431 CHY 437

Calendar Text for the Proposed Chemistry Minor

To receive the Minor, a student must complete six courses from the following course of study:

CHY 103 or CKCH 106 CHY 113 or (CKCH 113 + CKCH 107)

Four of the following:

CHY 142 or (CKCH 142 + CKCH 143) CHY 339 CHY 434 CHY 449

CHY 213 or (CKCH 216 + CKCH 217) CHY 344 CHY 435 CHY 501

CHY 223 or (CKCH 223 + CKCH 224) CHY 381 CHY 436 CHY 600

CHY 242 or CKCH 242 CHY 382 CHY 437 CHY 706

CHY 330 CHY 431 CHY 445

Notes: 1) Environmental science (CHY 423) has been removed as its focus is on the environment and sciences in general. 2) CHY103/113/142/213/223 all have Chang School of Continuing Education equivalents. This provides a great deal of flexibility for students to plan the acquisition of the Minor.

Accessibility from other Science Programs - The chart below provides an analysis of the current availability of Chemistry Minor courses to Science students. Note that the Minor is not available to Chemistry students.

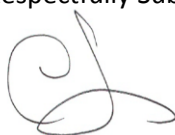
| Course | Biology | Computer Science | Mathematics* | Medical Physics | Financial Mathematics* | Biomedical Science** |
|---------|---------|-------------------------|--------------------|-----------------|------------------------|----------------------|
| CHY 103 | 103 req | 103 option (102 PRE) | 103 core option | 103 req | 103 core option | 103 req |
| CHY 113 | 113 req | - | 113 core option | 113 req | 113 core option | 113 req |
| CHY 142 | 142 req | - | PRE | 142 req | | 142 req |
| CHY 213 | PRE | PRE | PRE | - | | |
| CHY 223 | PRE | PRE | PRE | - | | |
| CHY 242 | req/PRE | - | PRE | - | | |
| CHY 330 | PRE | - | PRE | - | | |
| CHY 339 | - | - | - | - | | |
| CHY 381 | PRE | PRE | PRE | - | | |
| CHY 382 | - | - | - | - | | |
| CHY 344 | PRE | - | - | - | | |
| CHY 431 | PRE | - | PRE | - | | |
| CHY 434 | PRE | - | PRE | - | | |
| CHY 435 | PRE | - | PRE | - | | |
| CHY 436 | PRE | - | PRE | - | | |
| CHY 437 | PRE | - | - | - | | |
| CHY 445 | PRE | - | PRE | - | | |
| CHY 449 | PRE | - | PRE | - | | |
| CHY 501 | - | - | - | - | | |

| | | | | | | |
|---------|-----|---|-----|---|--|--|
| CHY 600 | PRE | - | - | - | | |
| CHY 706 | PRE | - | PRE | - | | |

Notes: *Students in both Mathematics programs take two semesters of one first year science. Students may opt for Chemistry at this point and subsequently take additional courses in chemistry. **The Biomedical Science program includes 6 open electives. Students pursuing a minor in Chemistry could take four chemistry courses as open electives.

Recommendation: Having satisfied itself of the merit of this proposal, ASC recommends: *That Senate approve the proposed modifications to the Minor in Chemistry.*

Respectfully Submitted,



Chris Evans, Chair for the Committee

ASC Members:

Chris Evans, Vice-Chair and Vice Provost Academic
 Heather Lane Vetere, Interim Registrar and Vice Provost Students
 Mark Lovewell, Interim Secretary of Senate
 John Turtle, Faculty of Arts, Psychology
 Andrew Hunter, Faculty of Arts, Philosophy
 Kelly McKay, Ted Rogers School of Management, Hospitality & Tourism
 Ian Baitz, Faculty of Communication and Design, Graphic Communications Management
 Jean Bruce, Faculty of Communication & Design, Image Arts
 Jennifer Poole, Faculty of Community Services, Social Work
 Nick Bellissimo, Faculty of Community Services, Nutrition
 Medhat Shehata, Faculty of Engineering and Architectural Science, Civil Engineering
 Noel George, Faculty of Science, Chemistry and Biology
 Trina Grover, Library
 Des Glynn, Chang School of Continuing Education
 Esztella Vezer, Faculty of Arts, Psychology
 Melissa Palermo, Faculty of Communication & Design, Image Arts – New Media