MEETING OF THE FACULTY COUNCIL OF THE FACULTY OF SCIENCE

A regular meeting of the Faculty Council of the Faculty of Science will be held on Wednesday, March 21, 2018 at 1 p.m. in C-2045.

AGENDA

1. Regrets
2. Adoption of the Minutes of December 6, 2017 and January 17, 2018
3. Business Arising from the Minutes: None
4. Correspondence: None
5. Reports of Standing Committees:
   A. Undergraduate Studies Committee:
      a. Department of Computer Science, Paper 5.A.a (47 Pages)
         i) Calendar change to Existing Regulations – 10.4.7 Computer Industry Internship Option (CIIIO)
         ii) Calendar change to Existing Course: Computer Science 2718
         iii) Calendar change to Existing Courses: Computer Science 2002, 2003 and 3754
         iv) Calendar change to Existing Course: Engineering 8814/Computer Science 4301
   B. Graduate Studies Committee:
      a. Department of Computer Science, special topics course, COMP 6919, Sensing with Mobile Devices, approved by the committee and presented to Faculty Council for information only, paper 5.B.a (6 pages)
      b. Department of Physics and Physical Oceanography, special topics course PHYS 6819, Introduction to Quantum Field Theory, approved by the committee and presented to Faculty Council for information only, paper 5.B.b (6 pages)
      c. SGS General Regulations 4.8 and 4.10 – Proposed Revisions, paper 5.B.c (7 pages).
   C. Nominating Committee: None
   D. Library Committee: None
6. Report of Teaching Consultant
7. Reports of Delegates from Other Councils
8. Report of the Dean
9. Question Period
10. Adjournment

Mary L. Courage, Ph.D.
Interim Dean of Science
FACULTY OF SCIENCE
FACULTY COUNCIL OF SCIENCE
MINUTES OF MEETING OF DECEMBER 6, 2017

A meeting of the Faculty Council of the Faculty of Science was held on Wednesday, December 6th, at 1:00 p.m. in room C-2045.

FSC 2557  Present
Biochemistry
Berry, M.    Booth, V.    Mulligan, M.

Biology
Chapman, T.  Staveley, B.

Chemistry
Fridgen, T.

Computer Science
Bungay, S.    Tang, J.    Vardy, A.

Earth Sciences
Hanchar, J.   Welford, K.

Mathematics & Statistics
Loredo-Osti, J. Merkli, M.   Ou, C.   Radford, C.
Sullivan, S.

Ocean Sciences
Fletcher, G.  Wroblewski, J.

Physics & Physical Oceanography
Curnoe, S.    Evstigneev, M.   Lagowski, J.  Plumer, M.

Psychology
Neath, I.    Thorpe, C.

Dean of Science Office
Barac, R.    Foss, K.    Foster, A.   Harding, S.   Jackson, G.
MacKenzie, T.
CITL
Todd, A.

Engineering
Bazan, C.

Registrar's Office
Murray, M.

Marine Institute
Caines, S.

FSC 2558
Regrets
Catto, N. Clift, T. Hillier, L. Jones, I. Mantyka, S.
Poduska, K.

FSC 2559
Adoption of Minutes
Moved: Minutes of November 15 2017, meeting be adopted (Sullivan/Foster).
Carried.

FSC 2560
Business Arising: None

FSC 2561
Correspondence: None

FSC 2562
Reports of Standing Committees:

A. Undergraduate Studies Committee:
Report presented by Shannon Sullivan, Chair, Undergraduate Studies Committee.

a) i) Moved: Department of Biochemistry, calendar change, new dedicated lab courses, new non-lab courses and related changes to B.Sc. programs. (Sullivan/Booth). Carried.

b) i) Moved: Department of Chemistry, course change, CHEM 2210 prerequisite change. (Sullivan/Fridgen). Carried.

c) i) Moved: Department of Mathematics and Statistics, course change, MATH 2130, prerequisite change. (Sullivan/Radford). Carried.


iii) Moved: Department of Mathematics and Statistics, course change, STAT 1510, prerequisite and related program changes. (Sullivan/Radford). Carried.


d) i) Moved: Department of Ocean Sciences, program change, Ocean Sciences Major. (Sullivan/Fletcher). Carried.

ii) Moved: Department of Ocean Sciences, program change, Ocean Sciences Minor. (Sullivan/Fletcher). Carried.

iii) Moved: Department of Ocean Sciences, new course, OCSC 499A/B. (Sullivan/Fletcher). Carried.

iv) Moved: Department of Ocean Sciences, new program, Ocean Sciences Honours. (Sullivan/Fletcher). One Abstention. Carried.


vi) Moved: Department of Ocean Sciences, new course, OCSC 4300. (Sullivan/Fletcher).

Amendment to the motion: The title of the new course, OCSC 4300, be changed to: Climate Change and Global Marine Fisheries Dynamics" (Fletcher/ Wroblewski). Amendment Carried.

The amended motion was carried.

e) i) Moved: Department of Psychology, course change, PSYC 2100. (Sullivan/Neath). Carried.

ii) Moved: Department of Psychology, program change, Psychology (Co-operative) and Behavioural Neuroscience (Co-operative). (Sullivan/Neath). Carried.

iii) Moved: Department of Psychology, program change, Behavioural Neuroscience. (Sullivan/Neath). Carried.
f) i) Moved: Faculty of Science – course deletions: SC 1000, 1001, 1150 and 1151. (Sullivan/Foster). Carried.

ii) Moved: Revision of Faculty of Science General Regulations. (Sullivan/Foster). Carried.

B. Graduate Studies Committee:
Report presented by J.C. Loredo-Osti, Chair, Graduate Studies Committee:


C. Nominating Committee: None

D. Library Committee:
The library is conducting an online survey to assist with determining the journal subscription needs of various disciplines within the Faculty of Science. Faculty members will be invited to complete the survey, which will ask members to select and rank the most relevant journals for their discipline. Currently, the library tracks the number of times an article is downloaded in a journal, and if it is more expensive to purchase journals versus individual article downloads, they would end the subscription with the journal. The results of this survey will assist the library to make more informed decisions.

FSC 2563 Report of Teaching Consultant: None

FSC 2564 Reports of Delegates from Other Councils: None

FSC 2565 Report of the Dean: None

FSC 2566 Question Period:
Any Foster thanked Shannon Sullivan for all the work he completed on the General Regulation calendar changes for the Faculty of Science. This work started several years ago, and was a much needed update.

FSC 2567 Adjournment
The meeting adjourned at 2:10 p.m.
FACULTY OF SCIENCE
FACULTY COUNCIL OF SCIENCE
MINUTES OF MEETING OF JANUARY 17, 2017

A meeting of the Faculty Council of the Faculty of Science was held on Wednesday, January 17th, at 1:00 p.m. in room C-2045.

FSC 2568 Present
Biochemistry
Berry, M. Mulligan, M.

Biology
Jones, I. Staveley, B.

Chemistry
Bottaro, C. Flinn, C. Kerton, F.

Computer Science
Bungay, S.

Earth Sciences
Hanchar, J.

Mathematics & Statistics
Loredo-Osti, J. Pike, D. Sullivan, S.

Ocean Sciences
Fletcher, G.

Physics & Physical Oceanography
Lagowski, J. Morrow, M.

Psychology
Neath, I.

Dean of Science Office
Barac, R. Foss, K. Foster, A. Harding, S. Jackson, G.
MacKenzie, T. Zedel, L.
CITL
Todd, A.

Marine Institute
Caines, S.

Graduate Students
Adekinle, A.

Faculty of Medicine
Kendall, E.

FSC 2569  Regrets
Fang, C.    Mantyka, S.

FSC 2570  Adoption of Minutes
The minutes of December 6, 2017 were not attached to the Faculty Council Agenda, so the adoption of the minutes will occur at the next faculty council meeting.

FSC 2571  Business Arising: None

FSC 2572  Correspondence: None

FSC 2573  Reports of Standing Committees:

A.  Undergraduate Studies Committee: None

B.  Graduate Studies Committee:
Report presented by J.C. Loredo-Osti, Chair, Graduate Studies Committee:

a) Moved: Department of Biochemistry, course proposal and calendar entry, BIOC 7000, Graduate Skills Course (Loredo-Osti/Berry). Carried.

b) J.C. Loredo-Osti, Chair, Graduate Studies Committee, presented the special topics course for Ocean Science, OCSC 7500, Immunology and Diseases of Aquatic Organisms, for information purposes only.

c) J.C. Loredo-Osti, Chair, Graduate Studies Committee, presented the special topics course for Physics and Physical Oceanography, PHYS 6366, Analysis of Data from Autonomous Underwater Vehicles, for information purposes only.

d) J.C. Loredo-Osti, Chair, Graduate Studies Committee, presented the special topics course for Physics and Physical Oceanography, PHYS 6014, Understanding Nuclear Magnetic Resource, for information purposes only.
C. **Nomingating Committee:** None

D. **Library Committee:** None

**FSC 2574 Report of Teaching Consultant:**
The Brown Bag sessions have started again for the Winter 2018 semester and the first session is on “Writing Courses in Sciences”, which takes place on Monday, January 22, 2018. Also, the awards season is starting and the call for the Dean of Science Distinguished Teacher Award is coming soon. The nomination deadline is February 16, 2018.

**FSC 2575 Reports of Delegates from Other Councils:** None

**FSC 2576 Report of the Dean:**
Dr. Courage informed Faculty Council members that there would be an additional $6 million dollar University budget shortfall for the current fiscal year. In late November, the University was notified that a special payment to the pension fund that is normally paid by the Province will now have to be paid by Memorial. To date, it is not known how the University will deal with this shortfall or how it will affect individual faculties. The Integrated Planning Committee (IPC) consultation with the Faculty of Science took place on Monday, January 15th to seek feedback and advice on how to find savings for the budget cuts.

**FSC 2577 Question Period:**
There was some discussion regarding the additional budget shortfall, with three main themes evident:

1. The University’s autonomy is linked to its financial control, and it is losing its autonomy as a result of the budget cuts. Tuition should be raised and the University needs to make a stronger and more vigorous case for this to the government.

2. The University should develop a strong and articulate public relations campaign for the general public and the government that would focus on student success and that highlights the important role that the University plays in education, research, and the provincial economy.

3. As we had very short notice for the consultation, the Faculty of Science should request a follow up meeting with the Integrated Planning Committee. Alternatively, the Faculty of Science should host its own session to discuss the budget and invite the IPC members to attend.

**FSC 2578 Adjournment**
The meeting adjourned at 1:35 p.m.
February 12, 2018

TO: All Members of Faculty Council, Faculty of Science

FROM: Maria Murray, Secretary, Committee on Undergraduate Studies
Faculty of Science

SUBJECT: Proposals for Calendar Changes

At a meetings held on January 23, 2018, the Faculty of Science Committee on Undergraduate Studies agreed that the following items should be forwarded to Faculty Council for approval:

1. Department of Computer Science

   (a) Calendar Change to Existing Regulations – 10.4.7 Computer Industry Internship Option (CIIO)

   (b) Calendar Change to Existing Course: Computer Science 2718

   (c) Calendar Changes to Existing Courses: Computer Science 2002, 2003 and 3754

   (d) Calendar Change to Existing Course: Engineering 8814/Computer Science 4301

   Maria Murray
Proposal
Calendar Change to Existing Regulations

Executive Summary

The Computer Industry Internship Option (CIO) has continued to evolve since it started in 1997. The Expectation of Work has changed and the student's evaluation is based on several reports submitted during the internship rather than one report. As well, the admission requirements will now require applicants to be full-time students at the time of application. This is a national standard for co-operative education and co-operative internship programs.

Resource Implications: Instructional Costs

None.

Consultations

Distributed to the Faculties of Business Administration, Education, Engineering and Applied Science, Humanities and Social Sciences, Medicine, Science, Schools of Human Kinetics and Recreation, Music, Nursing, Pharmacy, Social Work, Grenfell Campus, and Marine Institute.

Library Holdings and/or Other Resources Required

To be requested.

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation or authorized new funding for the Department of Computer Science.

Signature of Unit Head (if appropriate): [Signature]

Date: Nov 20, 2017

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date: [Signature]

Date:
Summary of Calendar Change to Existing Courses
Department of Computer Science

SUMMARY PAGE FOR SENATE
Approval Form

Course Number and Title

Section 10.4.7.1, 10.4.7.4, and 10.4.7.5

Abbreviated Course Title

N/A

Calendar Changes

10.4.7 Computer Industry Internship Option (CIO):

10.4.7.1 Admission Requirements
In order to be considered for admission to the CIO, an applicant:

1. must be a declared Computer Science Major;
2. must be registered as a full-time student at the time of application;
4. must have at least 15 credit hours remaining after the internship in order to satisfy degree requirements, 3 of which must be in Computer Science; and
5. is expected to return to University as a full-time student after the internship.

In addition to meeting the above, applicants are admission is also subject to academic performance.

10.4.7.2 Internship Duration: no change

10.4.7.3 Internship Guidelines: no change

10.4.7.4 Expectation of Work
Within two weeks of starting the internship, students are required to submit a list of their internship objectives to Co-operative Education. They are also required to submit a report to Co-operative Education due the last day of classes of each semester in which they are working. A progress report is required in semesters where the internship is continuing into the next semester. The progress report need only discuss the activities in that particular semester. A final report is required in the student's final internship semester. The final report must discuss the entire internship. Both reports will include a description of the student's internship projects and activities as well as the student's internship objectives and accomplishments. A completed Employer Evaluation Form should be submitted to Co-operative Education at the end of each semester.
Summary of Calendar Change to Existing Courses
Department of Computer Science

40.4.7.5 10.4.7.4 Registration, Assessment of Performance, and Assignment of Grades:
Students must register for the course Computer Science 3700 every semester during their internship.

Computer Science 3700 is a non-credit course open only to students who have been accepted into the Internship Program.

During the internship, the employer and intern will complete student performance evaluations every four months and will submit them to Co-operative Education. The final assessment of total work performed is the responsibility of Co-operative Education, and will be based upon both input from the employer and the intern's final internship report(s).

The Internship evaluation shall consist of two components:

1. **On-the-job Student Performance:** Job performance shall be assessed by Co-operative Education in consultation with the Department using information gathered during the internship and input from the employer. Evaluation of the on-the-job student performance will result in one of the following classifications: PASS WITH DISTINCTION, PASS, FAIL.

2. **The Final Internship Report(s):** Evaluation of the final internship report(s) will result in one of the following classifications: PASS WITH DISTINCTION, PASS, FAIL.

The evaluation of the on-the-job student performance and the final internship report(s) are recorded separately on the transcript.

Overall evaluation of the internship will result in one of the following final grades being awarded:

1. **PASS WITH DISTINCTION:** indicates outstanding performance in both the final internship report(s) and the on-the-job student performance. PASS WITH DISTINCTION has been awarded to each of the final internship report(s) and the on-the-job student performance.

2. **PASS:** indicates that performance meets expectations in both the final internship report(s) and on-the-job student performance. The student meets the requirements of a passing mark in the final internship report(s) and on-the-job student performance.

3. **FAIL:** indicates failing performance in either the final internship report(s) or on-the-job student performance or both.

Also, the following will be noted in the transcript of the intern:

1. Requirements for the Computer Industry Internship Option have been completed. Internship Duration: - months.

2. A grade of NC (No Credit) for Computer Science 3700 will be awarded in all semesters of the Internship Option prior to the final Semester.
Summary of Calendar Change to Existing Courses
Department of Computer Science

The succeeding four sections should be re-numbered accordingly.

Secondary Calendar Changes

None.

Calendar Entry After Changes

10.4.7 Computer Industry Internship Option (CIO):

10.4.7.1 Admission Requirements
In order to be considered for admission to the CIO, an applicant:

1. must be a declared Computer Science Major;
2. must be registered as a full-time student at the time of application;
4. must have at least 15 credit hours remaining after the internship in order to satisfy degree requirements, 3 of which must be in Computer Science; and
5. is expected to return to University as a full-time student after the internship.

In addition to the above, admission is also subject to academic performance.

10.4.7.2 Internship Duration: no change

10.4.7.3 Internship Guidelines: no change

10.4.7.4 Registration, Assessment of Performance, and Assignment of Grades:
Students must register for the course Computer Science 3700 every semester during their Internship.

Computer Science 3700 is a non-credit course open only to students who have been accepted into the Internship Program.

During the internship, the employer and intern will complete student performance evaluations every four months and will submit them to Co-operative Education. The final assessment of total work performed is the responsibility of Co-operative Education, and will be based upon both input from the employer and the intern's report(s).

The Internship evaluation shall consist of two components:

1. On-the-job Student Performance: Job performance shall be assessed by Co-operative Education in consultation with the Department using information gathered during the internship and input from the employer. Evaluation of the on-the-job student performance will result in one of the following classifications: PASS WITH DISTINCTION, PASS, FAIL.
2. Internship Report(s): Evaluation of the internship report(s) will result in one of the following classifications: PASS WITH DISTINCTION, PASS, FAIL.

The evaluation of the on-the-job student performance and the internship report(s) are recorded separately on the transcript.

Overall evaluation of the internship will result in one of the following final grades being awarded:
1. PASS WITH DISTINCTION: indicates outstanding performance in both the internship report(s) and the on-the-job student performance. PASS WITH DISTINCTION has been awarded to each of the internship report(s) and the on-the-job student performance.

2. PASS: indicates that performance meets expectations in both the internship report(s) and on-the-job student performance. The student meets the requirements of a passing mark in the internship report(s) and on-the-job student performance.

3. FAIL: indicates failing performance in either the internship report(s) or on-the-job student performance or both.

Also, the following will be noted in the transcript of the intern:
1. Requirements for the Computer Industry Internship Option have been completed. Internship Duration: - months.

2. A grade of NC (No Credit) for Computer Science 3700 will be awarded in all semesters of the Internship Option prior to the final Semester.

The succeeding four sections should be re-numbered accordingly.

Rationale

The Computer Industry Internship Option (CIIO) has continued to evolve since it started in 1997. The Expectation of Work has changed and the student's evaluation is based on several reports submitted during the Internship rather than one report. As well, the admission requirements will now require applicants to be full-time students at the time of application. This is a national standard for co-operative education and co-operative internship programs.

Consultations Sought From

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Summary of Calendar Change to Existing Regulations  
Department of Computer Science

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<td>Faculty of Engineering and Applied Science</td>
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<td>Department of Computer and Electrical Engineering</td>
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<td>Faculty of Humanities and Social Sciences</td>
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Library Report Received                                        | Yes               |

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: __________________________________________________________

Secretary: ______________________________________________________

Date: ___________________________________________________________
Proposal
Calendar Change to Existing Course

Executive Summary

With the introduction of the new Computer Science undergraduate curriculum in Fall 2016, adjustments will be required to the prerequisites for elective courses. The current prerequisites for COMP 2718 do not include courses from the new curriculum. To allow students in the new curriculum to complete COMP 2718, the new course COMP 2001 should be added to the list of potential prerequisites.

Resource Implications: Instructional Costs

None.

Consultations

Distributed to the Faculties of Business Administration, Education, Engineering and Applied Science, Humanities and Social Sciences, Medicine, Science, Schools of Human Kinetics and Recreation, Music, Nursing, Pharmacy, Social Work, Grenfell Campus, and Marine Institute.

Library Holdings and/or Other Resources Required

To be requested.

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation or authorized new funding for the Department of Computer Science.

Signature of Unit Head (if appropriate):  

Date:  

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date:
Summary of Calendar Change to Existing Courses
Department of Computer Science

SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title
2718 Development Tools, Work Flows and Concepts

Abbreviated Course Title
Dev Tools, Work Flows & Cncept

Calendar Change

2718 Development Tools, Work Flows and Concepts covers tools, work flows and concepts used in software development in a concentrated introductory set of topics. The essential work flows (with their underlying concepts) used to edit, build, test, combine with existing software and find existing software are introduced. The tools covered include text editors, programming language translators, file management tools, debuggers, scripting tools, source control tools, and building, testing and deployment tools. The architecture and use of an Integrated Development Environment are discussed.
LH: 3
PR: COMP 2500 or COMP 2510 or COMP 2710 or COMP 2001

Secondary Calendar Changes

None.

Calendar Entry After Changes

2718 Development Tools, Work Flows and Concepts covers tools, work flows and concepts used in software development in a concentrated introductory set of topics. The essential work flows (with their underlying concepts) used to edit, build, test, combine with existing software and find existing software are introduced. The tools covered include text editors, programming language translators, file management tools, debuggers, scripting tools, source control tools, and building, testing and deployment tools. The architecture and use of an Integrated Development Environment are discussed.
LH: 3
PR: COMP 2500 or COMP 2510 or COMP 2710 or COMP 2001
Summary of Calendar Change to Existing Courses  
Department of Computer Science

Rationale

With the introduction of the new Computer Science undergraduate curriculum in Fall 2016, adjustments will be required to the prerequisites for elective courses. The current prerequisites for COMP 2718 do not include courses from the new curriculum. To allow students in the new curriculum to complete COMP 2718, the new course COMP 2001 should be added to the list of potential prerequisites.

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Library Report Received: Yes

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name
Summary of Calendar Change to Existing Courses
Department of Computer Science

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair: ________________________________
Secretary: ____________________________
Date: ________________________________
Proposal
Calendar Change to Existing Courses

Executive Summary

With the introduction of the new Computer Science undergraduate curriculum in Fall 2016, students are no longer required to complete MATH 2320 for the major in Computer Science. This requirement has been replaced by COMP 1002, which has a uni-directional credit restriction with MATH 2320 (students who have completed MATH 2320 cannot obtain subsequent credit for COMP 1002). However, in joint programs, the COMP 1002 requirement is replaced by MATH 2320. Two courses in the new Computer Science program (COMP 2002 and COMP 2003) have COMP 1002 as a prerequisite. For both of those courses, MATH 2320 is a sufficient prerequisite in place of COMP 1002. To accommodate students in joint programs who will have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the COMP 1002 prerequisite allowing students to register for those courses with MATH 2320 instead of COMP 1002. This prerequisite change will affect a third Computer Science course, COMP 3754.

Resource Implications: Instructional Costs

None.

Consultations

Distributed to the Faculties of Business Administration, Education, Engineering and Applied Science, Humanities and Social Sciences, Medicine, Science, Schools of Human Kinetics and Recreation, Music, Nursing, Pharmacy, Social Work, Grenfell Campus, and Marine Institute.

Library Holdings and/or Other Resources Required

To be requested.

The costs, if any, associated with this change/these changes can be met from within the existing budget allocation or authorized new funding for the Department of Computer Science.

Signature of Unit Head (if appropriate):

Date: Nov 20, 2017

Signature of Dean/Associate Vice-President (Academic)/Vice-President:

Date:
SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title
2002 Data Structures and Algorithms

Abbreviated Course Title
Data Structures & Algorithms

Calendar Change(s)

2002 Data Structures and Algorithms covers fundamental data structures, algorithm design techniques. A problem-driven course, it focuses on computational problem solving from designing an efficient algorithm to implementing it using appropriate data structures.
CR: COMP 2711
LH: 3
PR: COMP 1001, and COMP 1002 or Mathematics 2320

Secondary Calendar Changes
None.

Calendar Entry After Changes

2002 Data Structures and Algorithms covers fundamental data structures, algorithm design techniques. A problem-driven course, it focuses on computational problem solving from designing an efficient algorithm to implementing it using appropriate data structures.
CR: COMP 2711
LH: 3
PR: COMP 1001, and COMP 1002 or Mathematics 2320

Course Number and Title
2003 Computer Architecture

Abbreviated Course Title
Computer Architecture
Summary of Calendar Change to Existing Courses
Department of Computer Science

Calendar Change(s)

2003 Computer Architecture introduces computer architecture at the digital logic implementation level, at the instruction set level, and at the level where programming languages are translated into the underlying machine instructions.
CR: COMP 3724
LH: 3
PR: COMP 1001, and COMP 1002 or Mathematics 2320

Secondary Calendar Changes

None.

Calendar Entry After Changes

2003 Computer Architecture introduces computer architecture at the digital logic implementation level, at the instruction set level, and at the level where programming languages are translated into the underlying machine instructions.
CR: COMP 3724
LH: 3
PR: COMP 1001, and COMP 1002 or Mathematics 2320

Course Number and Title

3754 Introduction to Information and Intelligent Systems

Abbreviated Course Title

Intro Info/Intelligent Sysyms

Calendar Change(s)

3754 Introduction to Information and Intelligent Systems introduces students to application areas that are away from usual number-based and text-based processing. Students will learn the basic concepts and become aware of the historical developments and social and ethical issues related to the application areas such as intelligent systems and information management. This exposure will help students to become knowledgeable about managing large volumes of data and dealing with problems that are well defined but whose algorithmic solutions are not feasible or problems that are fuzzily defined.
CR: COMP 2007
Summary of Calendar Change to Existing Courses
Department of Computer Science

LH: 3
PR: COMP 2711 or COMP 2002, and COMP 2742 or COMP 1002 or Mathematics 2320

Secondary Calendar Changes

None.

Calendar Entry After Changes

3754 Introduction to Information and Intelligent Systems introduces students to application areas that are away from usual number-based and text-based processing. Students will learn the basic concepts and become aware of the historical developments and social and ethical issues related to the application areas such as intelligent systems and information management. This exposure will help students to become knowledgeable about managing large volumes of data and dealing with problems that are well defined but whose algorithmic solutions are not feasible or problems that are fuzzily defined.

CR: COMP 2007
LH: 3
PR: COMP 2711 or COMP 2002, and COMP 2742 or COMP 1002 or Mathematics 2320

Rationale

With the introduction of the new Computer Science undergraduate curriculum in Fall 2016, students are no longer required to complete MATH 2320 for the major in Computer Science. This requirement has been replaced by COMP 1002, which has a uni-directional credit restriction with MATH 2320 (students who have completed MATH 2320 cannot obtain subsequent credit for COMP 1002). However, in joint programs, the COMP 1002 requirement is replaced by MATH 2320. Two courses in the new Computer Science program (COMP 2002 and COMP 2003) have COMP 1002 as a prerequisite. For both of those courses, MATH 2320 is a sufficient prerequisite in place of COMP 1002. To accommodate students in joint programs who will have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the COMP 1002 prerequisite allowing students to register for those courses with MATH 2320 instead of COMP 1002. This prerequisite change will affect a third Computer Science course, COMP 3754.

Consultations Sought From

Department of Biochemistry
Department of Biology
Department of Chemistry
Department of Earth Sciences
Department of Economics

Comments Received

Yes/No
Yes/No
Yes
Yes/No
Yes/No
Summary of Calendar Change to Existing Courses
Department of Computer Science

Consultations Sought From

Department of Geography
Department of Mathematics and Statistics
Department of Ocean Sciences
Department of Physics and Physical Oceanography
Department of Psychology
Faculty of Business Administration
Faculty of Education
Faculty of Engineering and Applied Science
Department of Computer and Electrical Engineering
Faculty of Humanities and Social Sciences
Faculty of Medicine
Faculty of Science
School of Human Kinetics and Recreation
School of Music
School of Nursing
School of Pharmacy
School of Social Work
Grenfell Campus
Marine Institute

Library Report Received

Comments Received

Yes/No
Yes
Yes/No
Yes
Yes/No
Yes
Yes
Yes
Yes/No
Yes
Yes/No
Yes
Yes
Yes
Yes
Yes

Signature: Dean, Associate Vice-President (Academic) or Vice-President

Name

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair:

Secretary:

Date:
1. Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

2. COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

3. To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an “or” clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.
Hi Minglun,

These changes have no effect on Chemistry programs and we support the changes.

Take care,

Travis

On 30/10/2017 4:05 PM, CS General wrote:

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an “or” clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

--
Travis D. Frigden BSc, BEd, PhD
Professor and Head
Department of Chemistry
Memorial University
St. John's, NL, A1B 3X7
chemhead@mun.ca
709-864-3470
http://www.chem.mun.ca/zfac/tdf.php?

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=41175&_mailbox=INBOX&_action=print&_extwin=1

10/31/2017
Hello Dr. Gong,

Thank you very much for the opportunity to provide feedback on these proposals.

These three proposals will not have an impact on the programs in the Faculty of Education.

Thank you,

Meghan

Meghan Collett, B.Sc., M.Sc. | Coordinator of Undergraduate Programs

Faculty of Education
Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1B 3X8
G.A. Hickman Building | Room ED 2020
Tel: 709 864-7554 | Fax: 709 864-2623

www.mun.ca/educ

This communication is intended for the use of the recipient to whom it is addressed, and may contain confidential, personal, and/or privileged information. Please contact the sender by reply email immediately if you are not the intended recipient of this communication, and do not copy, distribute, or take action relying on it. Any communication received in error should be deleted or destroyed.

----Original Message-----

From: CS General [mailto:compsci@mun.ca]
Sent: Monday, October 30, 2017 4:08 PM
To: Biochemistry Head <biochemistry@mun.ca>; Marino, Paul <pmarino@mun.ca>; chemhead@mun.ca; earthsciencehead@mun.ca; Locke, Wade <wlcke@mun.ca>; geol@mun.ca; math-head@mun.ca; Fletcher, Garth <flletcher@mun.ca>; physicshead@mun.ca; psychology.head@mun.ca; lichen@mun.ca; Faculty of Humanities and Social Sciences <hss@mun.ca>; Coady, Peggy <pcoady@mun.ca>; Collett, Meghan <mcollett@mun.ca>; engrconsult@mun.ca; lrrobinson@grnfell.mun.ca; ssdean@grnfell.mun.ca;1chasse@grnfell.mun.ca; Rohr, Linda <lerohr@mun.ca>; miucounseling@m-i.mun.ca; deanofmedicine@mun.ca; Sutherland, Ian D <isuther@mun.ca>; DeanNurse <Deannur@mun.ca>; pharma@mun.ca; Dean of Science <deansci@mun.ca>; adeanugradswk <adeanugradswk@mun.ca>; Cleyle, Susan <scleyle@mun.ca>
Subject: Calendar Changes for Computer Science Programs

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an “or” clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head
Dear Dr. Gong,

Thank you for the opportunity to comment on your proposed changes to the Computer Industry Internship Option and to the courses COMP 2002, 2003, 2718 and 3754.

In its meeting on Wed. Nov. 15, the Committee on Undergraduate Studies of the Faculty of Engineering and Applied Science found that these changes will have no impact on our programs.

Yours sincerely,

---

Dr. Glyn George, Chair
Committee on Undergraduate Studies
Faculty of Engineering and Applied Science
Memorial University of Newfoundland
St. John's NL A1B 3X5

On 2017-10-30 16:05, CS General wrote:

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head
Thanks for sending this, the School of Fine Arts has no feedback on these proposed changes.

TODD HENNESSEY, PhD (Birmingham)  |  DEAN

School of Fine Arts
Grenfell Campus, Memorial University
Corner Brook, Newfoundland
709.637.6277
www.grenfell.mun.ca

-----Original Message-----
From: CS General [mailto:compsci@mun.ca]
Sent: October 30, 2017 4:05 PM
To: biochad@grenfell.mun.ca; cmarinom@mun.ca; chemhead@mun.ca; earthscihead@mun.ca; mlocke@mun.ca; geoq@mun.ca;
math-head@mun.ca; fletcher@mun.ca; physicshead@mun.ca; psychology.head@mun.ca; licheng@mun.ca;
his@mun.ca; pacoady@mun.ca; mccolliv@mun.ca; engconsult@grenfell.mun.ca; robinson, laura
<lorobinson@grenfell.mun.ca>; dean - school of science and the environment <sse@dean@grenfell.mun.ca>
hennessy, todd <TENNESSEY@TENNESSEY@GRENFELL.MUN.CA>; lerohr@grenfell.mun.ca; miudconsultations@miu.mun.ca;
deanofmedicine@mun.ca; iasutherland@mun.ca; deanNurse@grenfell.mun.ca; pharminfo@grenfell.mun.ca; deansci@grenfell.mun.ca;
deanmedswk@grenfell.mun.ca; scleyle@grenfell.mun.ca
Subject: Calendar Changes for Computer Science Programs

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;
- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and
- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

--
Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-8652
Fax: (709) 864-2009

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This electronic communication is governed by the terms and conditions at http://www.grenfell.mun.ca/campus-services/Pages/Information-technology-services/electronic-communications-disclaimer.aspx
Hi,

I have reviewed the proposals from Computer Science and have no concerns.

Linda

Linda E. Rohr PhD
Associate Professor & Associate Dean Undergraduate Studies
Human Kinetics and Recreation, Memorial University
t: 709.864.5202 f: 709.864.7531 e: lerohr@mun.ca
PE 2025

From: CS General <compsci@mun.ca>
Reply-To: "compsci@mun.ca" <compsci@mun.ca>
Date: Monday, October 30, 2017 at 3:05 PM
To: Biochemistry Head <biohead@mun.ca>, "Marino, Paul" <pmarino@mun.ca>, "chemhead@mun.ca"
<chemhead@mun.ca>, "earthscihead@mun.ca" <earthscihead@mun.ca>, "Locke, Wade" <wlocke@mun.ca>, "geog@mun.ca"
geog@mun.ca>, "math-head@mun.ca" <math-head@mun.ca>, "Fletcher, Garth" <fletcher@mun.ca>, "physhead@mun.ca"
<physhead@mun.ca>, "psychology.head@mun.ca" <psychology.head@mun.ca>, "licheng@mun.ca" <licheng@mun.ca>,
Faculty of Humanities and Social Sciences <hss@mun.ca>, "Coady, Peggy" <spcoady@mun.ca>, "Collett, Meghan"
<mcollett@mun.ca>, "engrconsult@mun.ca" <engrconsult@mun.ca>, "frobinson@grenfell.mun.ca"
frobinson@grenfell.mun.ca>, "ssedean@grenfell.mun.ca" <ssedean@grenfell.mun.ca>, "thennessey@grenfell.mun.ca"
<thennessey@grenfell.mun.ca>, Linda Rohr <lerohr@mun.ca>, "mlusconsultations@m1.mun.ca"
<mlusconsultations@m1.mun.ca>, "deanofmedicine@mun.ca" <deanofmedicine@mun.ca>, "Sutherland, lan D"
sutherland@mun.ca>, DeanNurse <DeanNurse@mun.ca>, "pharminfo@mun.ca" <pharminfo@mun.ca>, Dean of Science
deansci@mun.ca>, adeanugradswk <adeanugradswk@mun.ca>, "Cleyle, Susan" <scleyle@mun.ca>
Subject: Calendar Changes for Computer Science Programs

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer industry Internship Option (CIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=41236&_mailbox=INBOX&_action=print&_extwin=1

11/7/2017
Logical proposals.

Tara

From: Chris Radford [mailto:cradford@mun.ca]
Sent: October-31-17 11:15 AM
To: mathconsult@mun.ca
Subject: Fwd: Fwd: Calendar Changes for Computer Science Programs

-------- Forwarded Message -------

Subject: Fwd: Calendar Changes for Computer Science Programs

Date: Tue, 31 Oct 2017 09:59:09 -0230

From: Math Head <math-head@mun.ca>

To: Chris Radford <cradford@mun.ca>

-------- Forwarded Message --------

Subject: Calendar Changes for Computer Science Programs

Date: Mon, 30 Oct 2017 16:05:11 -0230

From: CS General <compsci@mun.ca>

Reply-To: compsci@mun.ca

To: blochhead@mun.ca, pmarino@mun.ca, chemhead@mun.ca, earthscihead@mun.ca, wlocke@mun.ca, geog@mun.ca, math-head@mun.ca, fletcher@mun.ca, physicshead@mun.ca, psychology.head@mun.ca, lchenn@mun.ca, HSS@mun.ca, pacoadv@mun.ca, mcollett@mun.ca, econconsult@mun.ca, lrobinson@grenfell.mun.ca, ssean@grenfell.mun.ca, thennessey@grenfell.mun.ca, lerohr@mun.ca, mluconsultations@ml.mun.ca, deanofmedicine@mun.ca, isutherland@mun.ca, deannurse@mun.ca, pharinfo@mun.ca, deansci@mun.ca, adeanugradswk@mun.ca, sclevie@mun.ca

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=41184&_mbox=INBOX&_action=print&_extwin=1 11/1/2017
Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

==

Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-8652
Fax: (709) 864-2009
Dear Minglun,

Thank you for the opportunity to review and comment on the proposals to revise your Computer Industry Internship Option (CIIO), COMP 2718, and to include MATH 2320 as an "OR" prereq to COMP 2002, COMP 2003 and COMP 3754. These revisions will have no impact on Marine Institute programs and we are happy to support them.

Regards,
Bev

Bev Fleet
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University
TEL: 709-778-0369
FAX: 709-778-0535
Bev.Fleet@mi.mun.ca

-----Original Message-----
From: CS General [mailto:compsci@mun.ca]
Sent: Monday, October 30, 2017 4:05 PM
To: biohead@mun.ca; pmarino@mun.ca; chemhead@mun.ca; earthscihead@mun.ca; wlocke@mun.ca; geog@mun.ca; mach-head@mun.ca; fletcher@mun.ca; physicshead@mun.ca; psychology.head@mun.ca; licheng@mun.ca; HSS@mun.ca; pacoday@mun.ca; pmcollett@mun.ca; enarconsult@mun.ca; lrobinson@granfell.mun.ca; ssdean@grenfell.mun.ca; tkennessy@grenfell.mun.ca; lerc@mun.ca; MIUG Consultations <MIUGconsultations@mi.mun.ca>; deanoofmedicine@mun.ca; ismotherland@mun.ca; deanNurse@mun.ca; pharminfo@mun.ca; deansci@mun.ca; adeanugradswk@mun.ca; scleyle@mun.ca
Subject: Calendar Changes for Computer Science Programs

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

--
Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-8652
Fax: (709) 864-2009
The Faculty of Medicine is supportive regarding the calendar changes to existing courses and existing regulations as outlined in your proposal.

Regards

Cathy Vardy, MD, FRCPC  
Vice Dean and Professor of Pediatrics  
Faculty of Medicine  
Health Sciences Centre, M2H319  
Memorial University of NL

Tel: 709-864-6417  
Fax: 709-864-6336

-----Original Message-----
From: Steele, Dr. Margaret: Dean of Medicine  
Sent: Monday, October 30, 2017 9:23 PM  
To: Vardy, Cathy <cvardy@mun.ca>  
Subject: FW: Calendar Changes for Computer Science Programs

Could you please review Cathy
Thanks margaret

-----Original Message-----
From: CS General [mailto:compsci@mun.ca]  
Sent: Monday, October 30, 2017 4:07 PM  
To: Steele, Dr. Margaret: Dean of Medicine <DeanOfMedicine@med.mun.ca>  
Subject: Fwd: Calendar Changes for Computer Science Programs

Resending (correction to email address)

---
Department of Computer Science  
Memorial University of Newfoundland  
St. John's, NL A1B 3X5  
Phone: (709) 864-8652  
Fax: (709) 864-2009

-------- Original Message --------
Subject: Calendar Changes for Computer Science Programs  
Date: 2017-10-30 16:05  
From: CS General <compsci@mun.ca>  
To: biohead@mun.ca, pmarino@mun.ca, chemhead@mun.ca, earthscihead@mun.ca, wlocke@mun.ca, geog@mun.ca, math-head@mun.ca, fletcher@mun.ca, physicshead@mun.ca, psychology.head@mun.ca, licheng@mun.ca, nss@mun.ca, pacoady@mun.ca, mcollett@mun.ca, engconsult@mun.ca, lrobinson@grenfell.mun.ca, ssedean@grenfell.mun.ca, chennessy@grenfell.mun.ca, lerohr@mun.ca, mgconsultations@mi.mun.ca, deanoofmedicine@mun.ca, isuchol@mun.ca, deannurse@mun.ca, pharinfo@mun.ca, deansci@mun.ca, adenouradskw@mun.ca, sclevie@mun.ca  
Reply-To: compsci@mun.ca

Hello,

The Department of Computer Science is proposing calendar changes for:

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=41252&_mbox=INBOX&_action=print&_extwin=1

11/17/2017
Memorial Webmail :: FW: Calendar Changes for Computer Science Programs

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2710 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

--
Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-9552
Fax: (709) 864-2099

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=41252&_mbox=INBOX&_action=print&_extwin=1 11/17/2017
Hi Folks,

The School of Pharmacy is not Impacted by the proposed calendar changes for Computer Science.

Thanks,
Leslie

DR. LESLIE PHILLIPS
ASSOCIATE DEAN UNDERGRADUATE STUDIES
PROFESSOR | MUN SCHOOL of PHARMACY
Joint Appointment | MUN FACULTY of MEDICINE/Psychiatry
Clinical Pharmacotherapy Specialist | EASTERN HEALTH

Health Sciences Centre
300 Prince Philip Dr | St. John's, NL | A1B 3V6
Ph: 709-777-8299
Fax: 709-777-7044

-----Original Message-----
From: CS General [mailto:compsci@mun.ca]
Sent: October-30-17 4:08 PM
To: Biochemistry Head; Marino, Paul; chemhead@mun.ca; earthscihead@mun.ca; Locke, Wade; geog@mun.ca; math-head@mun.ca; Fletcher, Garth; physicshead@mun.ca; psychology.head@mun.ca; licheng@mun.ca; Faculty of Humanities and Social Sciences; Coady, Peggy; Collett, Meghan; engconsult@mun.ca; lrobinson@grenfell.mun.ca; ssedean@grenfell.mun.ca; thennessey@gre Rohr, Linda; miusconsultations@mi.mun.ca; deanofmedicine@mun.ca; Sutherland, Ian D; DeanNurse; pharinfo@mun.ca; Dean of Science; adeanugradswk; Cleyie, Susan
Subject: Calendar Changes for Computer Science Programs

Hello,

https://webmail.mun.ca/?task=mail&safe=0&uid=41192&_inbox=INBOX&_action=print&_extwin=1 11/1/2017
The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

--

Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-8652
Fax: (709) 864-2009
Subject: Re: Calendar Changes for Computer Science Programs
From: Ivan Salka-Volvod <salka@mun.ca>
To: CS General <compsci@mun.ca>
Cc: rgoulding Goulding <rgoulding@mun.ca>, Physics Head <physicshead@mun.ca>
Date: 2017-10-31 11:30

Dear Minglin,

Thank you for the opportunity to provide feedback on these three proposals:

- Computer Industry Internship Option (CIIIO)
- COMP 2718 prerequisites
- MATH 2320 as a prerequisite for COMP 2002, COMP 2003, COMP 3754.

The Department of Physics and Physical Oceanography is supportive of all of them.

Best regards,
Ivan

Ivan Salka-Volvod, Associate Professor
Chair, Undergraduate Studies Committee
Department of Physics and Physical Oceanography, Memorial University of Newfoundland
St. John's, NL, Canada, A1B 3X7
Phone: (709) 864-8886  Fax: (709) 864-8739  Room C3026

On 2017-10-30, at 4:35 PM, Physics Head wrote:

Hi Ivan and Rick,
Looks like housecleaning for CS. I have not problems with these changes.
Jofanta

On 2017-10-30, 4:05 PM, "CS General" <compsci@mun.ca> wrote:

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an \(^2\)or\(^2\) clause will be added to the prerequisites

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=41183&_mbox=INBOX&_action=print&_extwin=1 11/1/2017
Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Minglun Gong
Department Head

Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-8652
Fax: (709) 864-2009

<COMP-2320.pdf> <COMP-2718.pdf> <COMP-CLIO.pdf>
Hello Ming Lun,

The proposed calendar changes will have no impact on library resources.

Alison

Alison Ambi
709 664 7125
Interim Head, Collections

Subject Librarian:
Earth Sciences
Computer Science
Mathematics and Statistics
Physics and Physical Oceanography
Psychology

QEII Library
Memorial University of Newfoundland
www.library.mun.ca

-----Original Message-----
From: Cleyla, Susan
Sent: October-31-17 9:22 AM
To: Ambi, Alison <aambi@mun.ca>; Pitcher-March, Jackie <jpmerch@mun.ca>
Subject: FW: Calendar Changes for Computer Science Programs

-----Original Message-----
From: CS General [mailto:compsci@mun.ca]
Sent: Monday, October 30, 2017 4:08 PM
To: Biochemistry Head <biochemistry@mun.ca>; Marino, Paul <pmarino@mun.ca>; chemhead@mun.ca; earthscihead@mun.ca; Locke, Wade <wlocke@mun.ca>; geog@mun.ca; math-head@mun.ca; Fletcher, Garth <fletcher@mun.ca>; physicshead@mun.ca; psychology.head@mun.ca; lichen@mun.ca; Faculty of Humanities and Social Sciences <has@mun.ca>; Coady, Peggy <pacoady@mun.ca>; Collett, Meghan <mcollett@mun.ca>; engconsult@mun.ca; horobinson@grenfell.mun.ca; asedean@grenfell.mun.ca; thennessy@grenfell.mun.ca; Rohr, Linda <lerohr@mun.ca>; miuconsultations@ml.mun.ca; deanofmedicine@mun.ca; Sutherland, Ian D <isutherland@mun.ca>; Dean, Nurse <deannurse@mun.ca>; pharminfo@mun.ca; Dean of Science <deanscience@mun.ca>; adeanurgradswk <adeanurgradswk@mun.ca>; Cleyla, Susan <scleyla@mun.ca>
Subject: Calendar Changes for Computer Science Programs

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an “or” clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

https://webmail.mun.ca/?task=mail&_safe=0&_uid=41180&_mailbox=INBOX&_action=print&_extwin=1 11/1/2017
Memorial Webmail :: RE: Calendar Changes for Computer Science Programs

Minglun Gong
Department Head

Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-8652
Fax: (709) 864-2009

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=41180&_mbox=INBOX&_action=print&_extwin=1 11/1/2017
Calendar Changes for Computer Science Programs

Subject: Calendar Changes for Computer Science Programs
From: CS General <compsci@mun.ca>
To: <blochhead@mun.ca>, <pmarino@mun.ca>, <chemhead@mun.ca>, <earthscihead@mun.ca>, <wlocke@mun.ca>, <geog@mun.ca>, <mathhead@mun.ca>, <fletcher@mun.ca>, <psychology.head@mun.ca>, <blochhead@mun.ca>, <pmarino@mun.ca>, <chemhead@mun.ca>, <earthscihead@mun.ca>, <wlocke@mun.ca>, <geog@mun.ca>, <mathhead@mun.ca>, <fletcher@mun.ca>, <physhead@mun.ca>, <psychology.head@mun.ca>, <licheng@mun.ca>, <SSE@mun.ca>, <paceady@mun.ca>, <mcollett@mun.ca>, <engrconsult@mun.ca>, <irobinson@grenfell.mun.ca>, <ssedean@grenfell.mun.ca>, <thennessey@grenfell.mun.ca>, <lerohr@mun.ca>, <mgugconsultations@mun.ca>, <deanofmedicine@mun.ca>, <lsutherland@mun.ca>, <deanNurse@mun.ca>, <pharminfo@mun.ca>, <deanscl@mun.ca>, <adeanugradswk@mun.ca>, <sciyle@mun.ca>

Reply-To: <compsci@mun.ca>
Reply-To: <compsci@mun.ca>
Date: 2017-10-30 16:05

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CII0) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3734.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Mingjun Gong
Department Head

---

Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-8652
Fax: (709) 864-2009

https://webmail.mun.ca/?_task=mail&_safe=0&_uid=95&_mbox=Sent&_action=print&_extwin=1 10/31/2017
Resending (correction to email address)

---

Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-6652
Fax: (709) 864-2009

-------- Original Message --------

Subject: Calendar Changes for Computer Science Programs
Date: 2017-10-30 16:05
From: CS General <compsci@mun.ca>
To: biohead@mun.ca, pmarino@mun.ca, chemhead@mun.ca, earthscihead@mun.ca, wlocke@mun.ca, geog@mun.ca, math-head@mun.ca, fletcher@mun.ca, physicshead@mun.ca, psychology-head@mun.ca, licheng@mun.ca, HSS@mun.ca, pecosky@mun.ca, mcollett@mun.ca, enrgconsult@mun.ca, lbrobinson@grenfell.mun.ca, psedean@grenfell.mun.ca, thennessey@grenfell.mun.ca, lerohr@mun.ca, migconsultations@mi.mun.ca, deanofmedicine@mun.ca, isatherland@mun.ca, deannurse@mun.ca, pharinfo@mun.ca, deansci@mun.ca, adeanugradswk@mun.ca, sclevin@mun.ca
Reply-To: compsci@mun.ca

Hello,

The Department of Computer Science is proposing calendar changes for:

- Computer Industry Internship Option (CIIO) to reduce the number of reports submitted by students, and that applicants be full-time students at the time of application;

- COMP 2718 to include an additional prerequisite course (one of the new courses from the new program which began in Fall 2016); and

- To accommodate students in joint programs who have completed MATH 2320 instead of COMP 1002, an "or" clause will be added to the prerequisites for COMP 2002, COMP 2003, COMP 3754.

Enclosed are the proposals for these Calendar Changes to Existing Courses for your review. We would appreciate receiving any comments by November 27, 2017.

Regards,

Hinglun Gong
Department Head

---

Department of Computer Science
Memorial University of Newfoundland
St. John's, NL A1B 3X5
Phone: (709) 864-6652
Fax: (709) 864-2009

https://webmail.mun.ca/?task=mail&safe=0&uid=96&_mbox=Sent&_action=print&_extwin=1 10/31/2017
Proposal
Calendar Change to Existing Course
ENGI 8814 / COMP 4301 Computer Vision

Executive Summary

This is a proposal to add a lab component to this cross-listed course. The proposal is to include six labs, 3 hours each, to give students hands on training using computer vision tools. The proposal is a reflection of the already existing practice of giving students unofficial labs outside the lectures.

Resource Implications: Instructional Costs

This course is offered in common classes with the graduate course ENGI 9805. Similar changes are proposed for ENGI 9805. No extra instructional costs will be incurred. The instructor is already giving labs to students as an optional help. The labs are conducted in the general lab EN 3000. The software used is Matlab which is already installed on the computers in the lab.

Consultations

Evidence of consultation (for the ENGI 8814 course) begins on page 2.

Library Holdings and/or Other Resources Required

The Library report is below.

The costs, if any, associated with these changes can be met from within the existing budget allocation or authorized new funding for the Department of Electrical and Computer Engineering in the Faculty of Engineering and Applied Science, which currently offers this course.

Signature of the Head of the Department of

Electrical and Computer Engineering: ___________________ Date: _______________

Computer Science: ___________________ Date: Nov 20, 2017

Signature of the Dean of the Faculty of

Engineering and Applied Science: ___________________ Date: _______________

Science: ___________________ Date: _______________
Evidence of Consultation (original proposal for ENGI 8814)

E-mail sent 2017 June 26

From: Engineering Consult [mailto:engrconsult@mun.ca]
Sent: Monday, June 26, 2017 11:28 AM
To: Business Administration, Consultations <fba.ad.undergrad@mun.ca>; Hickey, Ruth B. <rhickey@mun.ca>; Dean of Science <deansci@mun.ca>; Hicks, Sue <shicks@mun.ca>; Mellor, Judith <jmellor@mun.ca>; Grenfell, Campus <associatevpoffice@grenfell.mun.ca>; Hickey, Marie <mehickey@mun.ca>; HSS, Consultations <stacey.m@mun.ca>; Marine, Institute <miugconsultations@mi.mun.ca>; Medicine_1 <cvardy@mun.ca>; Medicine_2 <Sherry.caines@med.mun.ca>; Volk, Maureen <mvolk@mun.ca>; DeanNurse <DeanNurse@mun.ca>; Pharmacy, School of <pharmac@mun.ca>; adeanugradswk <ad@gradswk@mun.ca>; Library Correspondence <univlib@mun.ca>
Cc: Fisher, Andrew <adfisher@mun.ca>; Edmunds, Jayde <edmundsj@mun.ca>; Morgenstern, Marion <mmorgenstern@mun.ca>; Dennis Peters <dpeters@mun.ca>; Bruce, Regina <rbruce@mun.ca>; Taylor-Harding, Dianne <dtaylor@mun.ca>
Subject: ENGI 8814 Consultation Request

The Department of Electrical and Computer Engineering in the Faculty of Engineering and Applied Science proposes a minor change to add six laboratory sessions to the existing elective course ENGI 8814 "Computer Vision". The proposal is attached.

We would appreciate receipt by August 09 of any comments that you may have on this proposal.

Yours sincerely,

--

Dr. Glyn George, Chair
Committee on Undergraduate Studies
Faculty of Engineering and Applied Science
Memorial University of Newfoundland
St. John's   NL   A1B 3X5
Replies

From the Calendar Editor (Office of the Registrar), 2017 June 27

From Bruce, Regina <rbruce@mun.ca>
To Engineering Consult <engrconsult@mun.ca> ...
Date Tue 09:17

Hi:

I am ok with this proposal My only thought is that, while I do see the importance of the lab component, with the heavy load that your students already have, is it possible that this course with be avoided with an added lab component?

Regard, Regina

Reply:

Some of the existing technical elective courses in Academic Term 8 also have laboratory components. Students in their final semester often choose technical electives based on career interest rather than quantity of contact time (lectures + labs). This Calendar change makes existing practice official. No change in enrolment due to this Calendar change is expected.

From the School of Nursing, 2017 June 27

Subject FW: ENGI 8814 Consultation Request
From Gaudine, Alice <agaudine@mun.ca>
To engrconsult@mun.ca <engrconsult@mun.ca>
Date Tue 13:00

Hello,

I have no comments.

Alice

Alice Gaudine, PhD, RN
Dean and Professor, School of Nursing
Memorial University of Newfoundland
St. John's, NL A1B 3V6
From the Faculty of Education, 2017 June 27

Subject Re: ENGI 8814 Consultation Request
From Blake, Hayward <hblake@mun.ca>
To engrconsult@mun.ca <engrconsult@mun.ca>
Date Tue 14:48

To whom it may concern,

On behalf of the Faculty of Education, I have reviewed the rationale from the The Department of Electrical and Computer Engineering in the Faculty of Engineering and Applied Science and its proposal for a minor change to add six laboratory sessions to the existing elective course ENGI 8814 "Computer Vision". We support the rationale to do so.

Hayward

Hayward Blake
Coordinator - Field Services and Admissions
Faculty of Education

From the Faculty of Medicine, 2017 June 28

Subject RE: ENGI 8814 Consultation Request
From cvardy@mun.ca
To engrconsult@mun.ca
Date Today 12:32

Dear Dr. Glyn

The Faculty of Medicine supports the changes as outlined in your report.

Sincerely,

Cathy Vardy

Cathy Vardy, MD, FRCP(C)
Vice Dean
Faculty of Medicine
From the School of Pharmacy, 2017 June 28

Subject FW: ENGI 8814 Consultation Request
From Phillips, Leslie <lphilip@mun.ca>
To Engineering <engrconsult@mun.ca>
Date Wed 16:54

Pharmacy has no concerns regarding the ENGI 8814 request.

Thanks,
Leslie

DR. LESLIE PHILLIPS
ASSOCIATE DEAN UNDERGRADUATE STUDIES
PROFESSOR | MUN SCHOOL OF PHARMACY

From the Faculty of Business Administration, 2017 June 30

Subject Re: ENGI 8814 Consultation Request
From Associate Dean of Undergraduate Faculty of Business Administration <adundgradfba@mun.ca>
To Engineering Consultations <engrconsult@mun.ca>
Date Today 08:59

Hello:

Thank you for the opportunity to comment on this proposal. The Faculty of Business Administration has no concerns with the proposed changes.

--larry
From the Marine Institute, 2017 August 18

Subject RE: ENGI 8814 Consultation Request
From MIUG Consultations <MIUGconsultations@mi.mun.ca>
Sender Dawn King <Dawn.King@mi.mun.ca>
To Engineering Consult <engrconsult@mun.ca>
Date Fri 13:39

Glyn,

Apologies for the late reply and thank you for the opportunity to review and respond to the proposed change to the course ENGI 8814 Computer Vision.

This change will have no impact on the programs at the Marine Institute. We are happy to support these changes as presented.

All the best.

Derek Howse

Derek Howse
Chair, Undergraduate Studies Committee
Marine Institute, Memorial University

Library Report, received 2017 July 30

Subject RE: ENGI 8814 Consultation Request
From Taylor-Harding, Dianne <dtaylor@mun.ca> Add contact
To 'Engineering Consult' <engrconsult@mun.ca> Add contact
Cc Ambi, Alison <aambi@mun.ca> Add contact
Date Sun 15:28

Upon review of the proposed calendar description for course ENGI8814 Computer Vision, I have determined that the change will have no impact on the collections activities of the Memorial University Libraries. The Memorial University Libraries hold Research levels collections in Computer Vision; no additional library materials will be required to support this revised course.

Regards,

Dianne Taylor-Harding,
Collections Librarian for Reference,
Queen Elizabeth II Library,
Memorial University of Newfoundland
[Library report here]
[Library report here]
SUMMARY PAGE FOR SENATE

Approval Form

Course Number and Title       ENGI 8814 / COMP 4301 Computer Vision
Abbreviated Course Title     Computer Vision

Calendar Changes

On page 158 of the 2017-18 edition of the Calendar,

ENGI 8814 Computer Vision (same as Computer Science 4301) studies how to develop methods that enable a machine to "understand" or analyze images. The course introduces the fundamental problems in computer vision and the state-of-the-art approaches that address them. Topics include feature detection and matching, geometric and multi-view vision, structure from X, segmentation, object tracking and visual recognition.

CR: Computer Science 4301
PR: ENGI 7854 or Computer Science 3301 or permission of the instructor
LH: Six 3-hour sessions per semester

On page 549 of the 2017-18 edition of the Calendar,

COMP 4301 Computer Vision (same as Engineering 8814) studies how to develop methods that enable a machine to "understand" or analyze images. The course introduces the fundamental problems in computer vision and the state-of-the-art approaches that address them. Topics include feature detection and matching, geometric and multi-view vision, structure from X, segmentation, object tracking and visual recognition.

CR: Engineering 8814
PR: COMP 3301 or Engineering 7854 or permission of the instructor
LH: Six 3-hour sessions per semester
Calendar Entries after Changes

**ENGI 8814 Computer Vision** (same as Computer Science 4301) studies how to develop methods that enable a machine to "understand" or analyze images. The course introduces the fundamental problems in computer vision and the state-of-the-art approaches that address them. Topics include feature detection and matching, geometric and multi-view vision, structure from X, segmentation, object tracking and visual recognition.

CR: Computer Science 4301  
PR: ENGI 7854 or Computer Science 3301 or permission of the instructor  
LH: Six 3-hour sessions per semester

**COMP 4301 Computer Vision** (same as Engineering 8814) studies how to develop methods that enable a machine to "understand" or analyze images. The course introduces the fundamental problems in computer vision and the state-of-the-art approaches that address them. Topics include feature detection and matching, geometric and multi-view vision, structure from X, segmentation, object tracking and visual recognition.

CR: Engineering 8814  
PR: COMP 3301 or Engineering 7854 or permission of the instructor  
LH: Six 3-hour sessions per semester

Rationale

After the recent Engineering accreditation visit, some comments were made to include more hands-on experiences for students in senior terms.

Currently, there is an already existing practice of giving unofficial labs for this course outside the lectures for interested students. The proposal is to include six official labs, 3 hours each, to give students hands-on training using software tools.

The prerequisite list for ENGI 8814 is also being updated to match the recently cross-listed course COMP 4301.
Consultations Sought From

Grenfell Campus
Marine Institute
Office of the Registrar (Calendar Editor)
Faculty of Business Administration
Faculty of Education
Faculty of Humanities and Social Sciences
Faculty of Medicine
School of Human Kinetics and Recreation
School of Music
School of Nursing
School of Pharmacy
School of Social Work

Library Report Received
Approved by Deans

Comments Received
No
Yes
Yes
Yes
No
Yes
No
No
Yes
Yes
No

Dr. G.F. Naterer (Engineering & Applied Science), Dr. M. Abrahams (Science)

FOR OFFICE USE ONLY

APPROVAL GRANTED BY SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Chair:
Secretary:
Date:
Hi Gail,

the course special topics course COMP-6919 has been approved with 10 votes in favour (Ron, Brian, Stephanie, Ken, Tom, Christina, Ivan, Rob, Carolyn and myself); none against.

Regards,

-j

On 01/11/2018 02:26 PM, Kenny, Gail wrote:
> Hi JC,
> >
> > I have attached the paperwork for COMP 6919, Sensing with Mobile Devices, a special topics course proposal from the Computer Science Department, for review by the graduate studies committee.
> >
> > Gail
> >
> > Gail Kenny
> > Assistant to the Dean
> > Faculty of Science Office
> > Memorial University of Newfoundland
> > St. John's, NL A1B 3X7
> > gkenny@mun.ca
> >
> >
January 19, 2018

TO: Registrar's Office

FROM: Secretary, Faculty of Science Faculty Council

SUBJECT: Special Topics Course

The special topics course, COMP 6919, Sensing with Mobile Devices, has been approved by the Faculty of Science Faculty Council Graduate Studies Committee. The Request for Approval of a Graduate Course forms are attached. If you require more information please let me know.

[Signature]

Gina Jackson
Secretary, Faculty of Science Faculty Council

cc: A. Williams, School of Graduate Studies
R. Edwards, Department of Computer Science
Request for Approval of a Graduate Course

To: Dean, School of Graduate Studies
From: Faculty/School/Department/Program
Subject: ☑ Regular Course  ☑ Special/Selected Topics Course

Course No.: COMP 6919
Course Title: Sensing with Mobile Devices

I. To be completed for all requests:

A. Course Type:
   ☑ Lecture course  ☐ Lecture course with laboratory
   ☐ Laboratory course  ☐ Undergraduate course
   ☐ Directed readings  ☐ Other (please specify)

B. Can this course be offered by existing faculty?
   ☑ Yes  ☐ No

C. Will this course require new funding (including payment of instructor, labs, equipment, etc.)?
   If yes, please specify:
   ☐ Yes  ☑ No

D. Will additional library resources be required
   (if yes, please contact munul@mun.ca for a resource consultation)?
   ☐ Yes  ☑ No

E. Credit hours for this course: 3

F. Course description (reading list required):
   Smart mobile devices have penetrated many aspects of the modern society and been woven into fabric of our everyday life. They pack a great deal of computational power and a rich set of sensors, and yet they are energy-efficient and ultra portable. They are capable of sensing our surroundings with precision and persistence, and we can capitalize on such capabilities to be...

G. Method of evaluation:

<table>
<thead>
<tr>
<th>Written</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class tests</td>
<td>30%</td>
</tr>
<tr>
<td>Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Other (specify): Project</td>
<td>40%</td>
</tr>
<tr>
<td>Final examination:</td>
<td>Total 100%</td>
</tr>
</tbody>
</table>

1 Must specify the additional work at the graduate level
II. To be completed for special/selected topics course requests only

For special/selected topics courses, there is no evidence of:

1. duplication of thesis work
   Instructor's initials
   Y.C.
   
2. double credit
   Y.C.

3. work that is a faculty research product
   Y.C.

4. overlap with existing courses
   Y.C.

Recommended for offering in the

- Fall
- Winter
- Spring 2019

Length of session if less than a semester:

III. This course proposal has been prepared in accordance with General Regulations governing the School of Graduate Studies

[Signature]
Course instructor

[Signature]
Approval of the head of the academic unit

2018.12.19
Date

Jan 3, 2018
Date

IV. This course proposal was approved by the Faculty/School/Council

[Signature]
Secretary, Faculty/School/Council

Jan 19/18
Date

Updated June 2017
COMP 6919
Sensing with Mobile Devices

Students Interested
Graduate students who are interested in using modern mobile devices as sensory mechanisms to make sense of the context of user-initiated actions.

Rationale
Smart mobile devices have become a prevalent part of modern society. They can extend our senses and augment our cognition when orchestrated correctly.

Objectives of the Course
Smart mobile devices have penetrated many aspects of the modern society and been woven into fabric of our everyday life. They pack a great deal of computational power and a rich set of sensors, and yet they are energy-efficient and ultra portable. They are capable of sensing our surroundings with precision and persistence, and we can capitalize on such capabilities to be more situation-aware, informed, and foresighted. The course covers programming tools to obtain sensed data via smart mobile devices and algorithmic techniques to distill information and knowledge from thus acquired data. It further investigates avenues of using such knowledge to construct an intelligent ambience around users.

Background
- Algorithms for machine learning, graph models, and applied computing problems
- Programming general computer systems and mobile devices

Representative Course Outline
- Mobile data collection (10 hours)
  - Radios
  - Motion
  - Location
  - Sound
  - Images and videos
  - User interaction profiles
- Making sense of data (10 hours)
  - Signal sampling and processing
  - Machine learning fundamentals
  - Probabilistic state estimation
- Applications (10 hours)
- General gestures
- Activity recognition
- Augmented reality
- Indoor positioning
- Intelligent transportation systems

- From mobiles to other platforms
  - Aerial, ground, and underwater robots
  - Embedded systems

(2 hours)

Labs

The course has a series of weekly labs as tutorials on programming the iOS and Android OS mobile devices. They are not evaluated.

Method of Evaluation

<table>
<thead>
<tr>
<th>Assignment (×5)</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm exam</td>
<td>30%</td>
</tr>
<tr>
<td>Project and report</td>
<td>30%</td>
</tr>
<tr>
<td>Project presentation</td>
<td>10%</td>
</tr>
</tbody>
</table>

Credit Restrictions

N/A

Suggested texts/references

- "IEEE Pervasive Computing", IEEE Press, periodical

Instructors

Y. Chen

Calendar Entry

COMP-6919 investigates data that can be gathered using smart mobile devices and how to make sense of the data for the users. Students learn programming mobile platforms and knowledge generation out of sensed data.
Hi Gail,

the course has been approved with 10 votes in favour (Cyr, Ron, Luke, Ivan, Ken, Stephanie, Carolyn, Yuanzhu, Brian and myself).

Best,

- j

On 01/03/18 10:28 AM, Kenny, Gail wrote:
> Good morning JC,
> 
> Please find attached the paperwork for PHYS 6819 for discussion by the Graduate Studies Committee. The course will be offered at the Grenfell campus in Fall 2018, if approved.
> 
> Gail
> 
> Gail Kenny
> Assistant to the Dean
> Faculty of Science Office
> Memorial University of Newfoundland
> St. John's, NL  A1B 3X7
> gkenny@mun.ca
> 
> -

JC Loredo-Osti, Professor
Department of Mathematics and Statistics Memorial University
Phone: +(709) 864 8729

"Alas! all music jars when the soul's out of tune"
--Miguel de Cervantes
Request for Approval of a Graduate Course

Adobe Reader, minimum version 8, is required to complete this form. Download the latest version: http://get.adobe.com/reader. (1) Save the form by clicking on the diskette icon on the upper left side of the screen; (2) Ensure that you are saving the file in PDF format; (3) Specify where you would like to save the file, e.g. Desktop; (4) Fill in the required data and save the file; (5) Submit the completed form to:

School of Graduate Studies: Memorial University of Newfoundland; IIC-2012 (Brunel Centre for Research and Innovation); St. John's, NL A1C 5S7 Canada Fax: 709.864.4702 eMail: ssg@mun.ca

To: Dean, School of Graduate Studies
From: Faculty/School/Department/Program
Subject: ☐ Regular Course ☑ Special/Selected Topics Course

Course No.: PHYS 6819

Course Title: Introduction to Quantum Field Theory

I. To be completed for all requests:

A. Course Type: ☑ Lecture course ☐ Lecture course with laboratory
☐ Laboratory course ☐ Undergraduate course
☐ Directed readings ☐ Other (please specify)

B. Can this course be offered by existing faculty? ☑ Yes ☐ No

C. Will this course require new funding (including payment of instructor, labs, equipment, etc.)? ☐ Yes ☑ No
   If yes, please specify:

D. Will additional library resources be required (If yes, please contact munlib@mun.ca for a resource consultation)? ☐ Yes ☑ No

E. Credit hours for this course: 3.0

F. Course description (reading list required):
   This course explores topics such as field quantization technique, development of Feynman calculus, Born and one-loop calculations, regularization of ultraviolet and infrared divergences, renormalization of the Quantum Electrodynamics, Lamb shift and anomalous magnetic dipole moments.

G. Method of evaluation: Percentage

<table>
<thead>
<tr>
<th></th>
<th>Written</th>
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<tr>
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<td>Assignments</td>
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<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final examination:</td>
<td>30%</td>
<td></td>
</tr>
</tbody>
</table>

Total 100%

1 Must specify the additional work at the graduate level
II. To be completed for special/selected topics course requests only

For special/selected topics courses, there is no evidence of:

1. duplication of thesis work
   Instructor's initials: A. A.

2. double credit
   A. A.

3. work that is a faculty research product
   A. A.

4. overlap with existing courses
   A. A.

Recommended for offering in the

Fall          Winter          Spring          2018

Length of session if less than a semester:

III. This course proposal has been prepared in accordance with General Regulations governing the School of Graduate Studies

A. Aleksejevs
   Course Instructor
   [Signature]

Approval of the head of the academic unit
   [Signature]

27/02/2018
   Date

March 4, 2018
   Date

IV. This course proposal was approved by the Faculty/School/Council

Secretary, Faculty/School/Council

[Signature]

Date

Updated June 2017
Physics 6819: An Introduction to Quantum Field Theory

Classes: Lectures, schedule: TBD

Instructor: Dr. Aleksandrs Aleksejevs, Ph. 639-2701, AS 3021
email: aaleksejevs@grenfell.mun.ca

Textbooks:

An Introduction to Quantum Field Theory, M. Peskin and D. Schroeder, (Perseus Books Publishing)

Description: The students should be familiar with Dirac notation and basics of the quantum mechanics before taking this course. The course is focused on various techniques in Quantum Field Theory. After the completion, the students will be able to calculate observables for the arbitrary processes in Quantum Electrodynamics up to one-loop level.

Evaluation:

Assignments: 40% (assignments are given on bi-weekly basis, no late submission of the assignment will be accepted)
Mid-term Test: 30% (in class 2-hour term test, problem based)
Final Take Home Exam: 30%

Outline.

I. The Dirac Field (~ 2 weeks)

1. Elements of Classical Field Theory

2. The Dirac Equation and Dirac Bilinears

3. Quantization of the Dirac Field: The Dirac Propagator
II. Interacting Fields and Feynman Diagrams (~2 weeks)

1. Perturbation Expansion of Correlation Functions
2. Wick’s Theorem
3. Feynman Diagrams
4. Cross Sections and S-Matrix
5. Computing S-Matrix Elements from Feynman Diagrams
6. Feynman Rules for Quantum Electrodynamics

III. Elementary Processes (~2 weeks)

1. Electron-positron Collisions: Trace Technology; Unpolarized Cross Section
2. Crossing Symmetry: Electron-Muon Scattering
3. Compton Scattering

IV. Radiative Corrections (~3 weeks)

1. Electron Self-Energy and Vertex Correction
2. Regularization of the Ultraviolet and Infrared Divergences
3. Photon Self-Energy: Vacuum Polarization
4. Box Diagram for Electron-Muon Scattering
5. Soft Photon Bremsstrahlung and Removal of Infrared Divergence
V. Renormalization of Quantum Electrodynamics (~3 weeks)

1. Multiplicative Renormalization: On-Shell Scheme

2. Renormalization Conditions and Ward-Takahashi Identity

3. Renormalization of the Charge, Mass and Wave Function

4. Lamb Shift: $2S_{1/2} - 2P_{1/2}$ Splitting

5. Anomalous Magnetic Moment of Muon: $(g-2)$

Important general University Policies:

It is the student’s responsibility to familiarize themselves with University guidelines.

You can find them at University Calendar, School of Graduate Studies, Section 2

Student Code of Conduct.
http://www.mun.ca/student/conduct/

Accommodations for Students with Disabilities
http://www.mun.ca/blundon/accommodations/
March 2, 2018

To: Faculty/School Councils

From: Dean. School of Graduate Studies

Re: Draft changes to calendar language for comprehensive examinations (4.8) and evaluation of theses (4.10)

Dear colleagues,

Before putting a motion to SGS Academic Council Executive and SGS Academic Council, we seek feedback on the attached calendar language changes. How you decide to solicit feedback is up to you, but we ask that all comments be sent to SGS (c/o Annette Williams, annwilliams@mun.ca) on or before April 27, 2018.

Summary of changes

1. All references to candidate(s) changed to student(s)

2. All uses of “his/her” either eliminated or changed to their or students

3. Adding or delegate into 4.8.1.1 for consistency

4. All references to “field”, “area”, “sub-disciplines”, “chosen field” changed to research area(s)

Rationale

The first three sets of changes reflect the ongoing and necessary work of updating calendar language.

The last set of changes results from the fact that PhD comprehensive examination structures vary widely across the university. Thus, use of terms such as “sub-disciplines” (particularly in section 4.8.2.3), where such disciplinary boundaries or distinctions do not inform the structure or content of comprehensive exams, can be confusing, misleading, and/or problematic to both students and comprehensive examination committees. We have therefore changed all the diction concerning subject areas to “research area(s).”
Corresponding changes are also made to the section on evaluation of theses for consistency.

As usual, nothing in these changes prevents academic units from writing their own comprehensive examination procedures using whatever terms they deem appropriate to their own research area(s). These changes are to ensure that the SGS regulations reflect general practices.

We seek faculty council feedback on these changes: namely, does the revised text still adequately reflect your practice?

Dr. Aimée Surprenant
4.8 Comprehensive Examinations

4.8.1 Master's Comprehensive Examination

1. The composition of the Comprehensive Examination Committee is specified in the Degree and Departmental regulations, and the Committee is appointed by the Dean. The Dean of Graduate Studies or delegate may exercise the right to attend. All members of the Committee including the Chairperson, but excluding the Dean of Graduate Studies or delegate, shall be voting members.

2. In this examination the candidates students must demonstrate an advanced knowledge of the academic discipline as defined by the academic unit in which they are students. Therefore, in order to be eligible to sit the examination, all course requirements must normally be completed.

3. In cases where there are multiple parts to a comprehensive exam, including written and oral parts, a candidate student must satisfy all parts of the examination to obtain a pass. The requirements to advance to a later part of the examination are specified in the Degree and Departmental regulations or by the appropriate academic unit.

4. Members of the Comprehensive Examination Committee shall decide the results of the comprehensive examination as indicated in a.-d. below:
   a. The category of 'pass with distinction' will be awarded to candidate students who demonstrate superior knowledge of their chosen research field. This category requires unanimous support of the Comprehensive Examination Committee.
   b. The category of 'pass' will be awarded to candidate students who demonstrate an acceptable knowledge of their chosen research area(s) and requires a simple majority vote.
   c. The category of 're-examination' selects those candidate students with an understanding of their research area(s) that lacks sufficient depth and scope as indicated by a simple majority of the Comprehensive Examination Committee. Only one such re-examination is possible and students in this category are not eligible for the award of 'pass with distinction'. If a re-examination is to be held, it must be conducted not less than one month and not more than six months after the first examination. The decision of the voting members of the Committee following this re-examination can only be 'pass' or 'fail' decided by simple majority. Failure will lead to immediate termination of the candidate student's program. There is no option for further re-examination.
   d. Students awarded a 'fail' are deemed, by unanimous vote of the Comprehensive Examination Committee, to be unable to demonstrate an adequate understanding of their research area(s). The candidate student's program is terminated. A simple majority vote will default to the award of 're-examination'.

5. The Chairperson of the Comprehensive Examination Committee shall report to the Head of the academic unit who shall report to the Dean. The result of the comprehensive examination(s) shall be reported to the candidate student by the Dean.

4.8.2 Ph.D. and Psy.D. Comprehensive Examination

1. The candidate student shall submit to a comprehensive examination, which may be written or oral or both as determined by the academic unit. Candidates students shall
normally take the examination no later than the end of the seventh semester in the
doctoral program. Unless an extension is approved by the Dean of Graduate Studies,
failure to take the examination at this time will result in the termination of the candidate
student's program.

2. This examination, whether written or oral, shall be conducted by a Committee appointed
by the Dean of Graduate Studies on the recommendation of the academic unit. It shall
consist of the Head of the academic unit (or delegate) who shall be the Chairperson, the
candidate student's Supervisor [or, where a Supervisor has not yet been appointed, the
Graduate Officer or Chair of the Graduate Studies (or equivalent) Committee], the Dean
of Graduate Studies (or delegate), and at least three other members, the total voting
members to be an odd number. All members of the Committee including the Chairperson,
but excluding the Dean of Graduate Studies or delegate, shall be voting members.

3. In this examination, the candidate student must demonstrate a mastery of those sub-
disciplines subjects appropriate to his/her the student's research area, as defined by the
academic unit in which he or she is a student. Therefore, in order to be eligible to sit the
examination, all course requirements must normally be completed. The sub-disciplines
research area(s) upon which the candidate student will be examined should be made
known to the candidate student no later than three months prior to the examination. The
candidate student must further be able to relate the specialization of his/her the research
to the larger context of these sub-disciplines research areas.

4. In cases where there are multiple parts to a comprehensive exam, including written and
oral parts, a candidate student must satisfy all parts of the examination to obtain a pass.
The requirements to advance to a later part of the examination are specified in the
Degree and Departmental regulations or by the appropriate academic unit.

5. Members of the Comprehensive Examination Committee shall decide the results of the
comprehensive examination as indicated in a.-d. below:

a. The category of 'pass with distinction' will be awarded to candidates students who
demonstrate superior knowledge of their chosen-field research area(s). This
category requires unanimous support of the Comprehensive Examination
Committee.

b. The category of 'pass' will be awarded to candidates students who demonstrate
an acceptable knowledge of their chosen research area and requires a simple
majority vote.

c. The category of 're-examination' selects those candidate students with an
understanding of their research area(s) that lacks sufficient depth and scope as
indicated by a simple majority of the Comprehensive Examination Committee.
Only one such re-examination is possible and students in this category are not
eligible for the award of 'pass with distinction'. If a re-examination is to be held, it
must be conducted not less than one month and not more than six months after
the first examination. The decision of the voting members of the Committee
following this re-examination can only be 'pass' or 'fail' decided by simple
majority. Failure will lead to immediate termination of the candidate's program.
There is no option for further re-examination.
d. Students awarded a 'fail' are deemed, by unanimous vote of the Comprehensive Examination Committee, to be unable to demonstrate an adequate understanding of their research area(s). The candidate's program is terminated. A simple majority vote will default to the award of 're-examination'.

6. The Chairperson of the Comprehensive Examination Committee shall report to the Head of the academic unit who shall report to the Dean. The result of the comprehensive examination(s) shall be reported to the candidate student by the Dean.

4.10 Theses and Reports

4.10.1 Thesis/Report Guide Supplement

The Guidelines for Theses and Reports, available at (www.mun.ca/sgs/go/guid_policies/theses.php), approved by the Academic Council of the School of Graduate Studies, provides the details for the examination process, general form and style of the thesis/report, required forms, number of copies, etc., required under this regulation.

4.10.2 Submission

1. Candidates Students must submit the thesis/report at least four months before the University Convocation at which the award of the Degree is expected (see University Diary in current edition of University Calendar for exact date). The School of Graduate Studies does not accept any responsibility for completing the prescribed procedure in time for the nearest Convocation unless theses or reports are submitted by the prescribed dates in any current academic year.

2. A thesis/report may not be submitted until the candidate student has fulfilled:
   a. All course requirements, if any
   b. All language requirements, if any
   c. The comprehensive examination, if required, and
   d. All other academic requirements of the academic unit concerned.

4.10.3 Evaluation of Master's Theses and Reports

1. Final examiners for the thesis/report will be appointed by the Dean on the recommendation of the academic unit. There will be two examiners for a Master's thesis. Examiners shall normally be those who have completed a graduate degree at the doctoral level, including a thesis, in the discipline or cognate area. These serving as examiners shall not have been involved in the preparation of the thesis/report.

2. Examination of the thesis/report will result in one of the following recommendations by each examiner. The thesis/report is:
   a. acceptable without modifications; or
   b. acceptable, modifications are required but the thesis does not have to be re-examined*; or
   c. unacceptable, the thesis/report requires modification and re-examination**; or
   d. totally unacceptable, the thesis/report is failed.***

*Modifications may include corrections of typographical errors and errors in nomenclature, improvement in phrasing, or rewriting of sections of the thesis/report. Modifications may be indicated in the text or listed separately;
**Modifications might include (but are not limited to) the rectification of one or more of the following deficiencies: (1) misinterpretation and/or misuse of the matter covered, omission of relevant materials, unfounded conclusions, illogicality of argument, improper analysis of data and the like, (2) bad writing, (3) unacceptable physical presentation. A detailed list of problems should be included with the report;
***A detailed list of the reason(s) for failure must be included in the report.

3. If all examiners recommend that the thesis/report is totally unacceptable, then the thesis will be failed, and shall not be re-examined.
4. If an examiner recommends that the thesis/report is unacceptable, and this recommendation is accepted by the Dean, then the student may apply to the Dean for permission to resubmit the thesis for re-examination in one of the following ways:
   a. to submit a modified thesis/report to the original examiners.
   b. to submit a modified thesis/report to new examiners.
   c. to submit the original thesis/report to an Examination Board to be appointed by the Dean.
5. If a thesis/report is re-examined, the candidate student will not be awarded a pass unless all examiners find the thesis acceptable.
6. Under no circumstances may a thesis/report be re-examined more than once.

4.10.4 Evaluation of Ph.D. and Psy.D. Theses
Candidates Students for the Degree of Doctor of Philosophy and the Degree of Doctor of Psychology must submit a written dissertation deemed acceptable by the University, and demonstrate their ability to defend their work in a public oral examination. For this reason, the final decision on whether a candidate student will be recommended for the award of the degree is made only at the conclusion of the oral examination (see The Examination Process).

1. Responsibilities of the Thesis Examining Board
   The work of each candidate student will be assessed by a Thesis Examining Board. Its first responsibility is to determine whether the thesis successfully demonstrates the candidate student's competence to undertake independent research work. The Board must be satisfied that the work contributes significantly to knowledge in the field of study; that the contribution is of high scholarly merit; that the candidate student is aware of the pertinent published literature; that it is written in a satisfactory style; and that it is free from typographical and other mechanical errors. The second responsibility of the Board is to conduct a final oral examination of the candidate student and to then recommend to the Dean of Graduate Studies whether the candidate student should be awarded the Degree.

2. Composition of the Thesis Examining Board
   The members of the Thesis Examining Board will be appointed by the Dean on the recommendation of the Head of the academic unit who will have consulted with the supervisory committee. The Board shall consist of four members. Normally these will be the candidate student's Supervisor (who serves on the Board in a non-voting capacity), two examiners from within the University, and one from outside the University. However, when circumstances warrant, a second external examiner may be substituted for one of the internal examiners with permission of the Dean. Examiners shall normally be those who have completed a graduate degree at the doctoral level, including a thesis, in the discipline or cognate area. Members of the supervisory committee other than the Supervisor are ineligible for appointment to the Board. Those serving as examiners shall not have been involved in the preparation of the thesis/report.

3. The Examination Process
   a. The voting members of the Board shall submit written reports on the thesis containing an assessment of the quality of the written work and a recommendation as to whether the candidate student should be permitted to proceed to an oral examination and defence of the work. An examiner may recommend:
      i. that the candidate student be allowed to proceed to the oral defence of the thesis*; or
      ii. that the candidate student not be allowed to proceed to the oral defence at this time*; or
      iii. that the candidate student should be failed.
   * Any suggested corrections or revisions should be outlined in the examiner's report. It is understood that it will be the responsibility of the Supervisory Committee to discuss the suggested changes with the candidate student, to determine which should be incorporated in the thesis before its final submission.
   ** This recommendation reflects the examiner's opinion that further research, re-analysis of data, or thorough rewriting of the material is required. The thesis may, however, be re-submitted for examination.
   b. If all examiners recommend that the candidate student should be failed, then the thesis shall not be re-examined.
   c. If an examiner recommends that the candidate student not be allowed to proceed to the oral defence, and this recommendation is accepted by the Dean, then the student may apply to the Dean for permission to resubmit the thesis for re-examination in one of the following ways:
i. to submit a modified thesis to the original examiners.
ii. to submit a modified thesis to new examiners.
iii. to submit the original thesis to an Examination Board to be appointed by the Dean.
d. No candidate student will be permitted to re-submit a thesis more than once. In case of a re-submitted thesis an examiner may recommend only:
i. that the candidate student be allowed to proceed to the oral defence of the thesis; or
or ii. that the candidate student should be failed.
e. After receiving the reports from all three voting members of the Board the Dean will consider the recommendations and determine whether an oral defence of the thesis will be scheduled.
f. The Final Oral Examination and Defence of Thesis will take place at a time and place to be determined by the Dean of Graduate Studies and will be chaired by the Dean or his/her delegate. The presence of all members of the Examining Board is normally required.
g. Following the defence, the Board will meet in camera to render a final assessment of the thesis and the candidate student’s ability to defend his/her work. The Board may recommend one of the following outcomes:
i. Passed with distinction (Awarded to candidate students who demonstrate superior knowledge of their chosen-field research area: this category requires unanimous support of the Board. A simple majority vote will result in a recommendation of ‘passed’).
ii. Passed
iii. Passed Subject to Conditions
iv. Re-examination required
v. Failed

* This recommendation may have attached to it the requirement that the candidate complete certain specified revisions to the satisfaction of the Supervisory Committee, the Head of the academic unit and the Dean. These revisions must have been specified in the written appraisal submitted prior to the Oral Examination.
** This recommendation is made if there are revisions beyond those specified in the written appraisal submitted prior to the Oral Examination. This recommendation must have the conditions attached and cannot include the option of re-examination.
*** The members of the Thesis Examination Board may attach to this recommendation a list of any requirements which they feel are appropriate.
**** ‘Re-examination not permitted.
h. If the members of the Board are unanimous in their recommendation, the Chair of the Examination may accept this recommendation and inform the candidate of the decision. In any other case, however, the delivering of any final decision shall be deferred pending further consultation within the School of Graduate Studies.
i. No candidate shall be permitted more than two Oral Examinations.

4.10.5 Time Limit for Revision
The final version of Master’s, Ph.D., and Psy.D. theses/reports found acceptable with or without corrections shall be submitted to the School of Graduate Studies within 6 months of the date on which the thesis/report and the student’s examiners’ reports are returned to the student’s academic unit. If a corrected thesis/report is not submitted within 6 months the student is considered to have withdrawn from the program. After this time, the student must apply to be readmitted. Master’s, Ph.D., and Psy.D. theses/reports requiring re-examination shall be resubmitted to the School of Graduate Studies within 12 months of the date on which the thesis/report and the examiner’s reports are returned to the student. Students requiring resubmission and re-examination of theses/reports must maintain their registration during this period. Failure to resubmit the revised thesis/report within 12 months will result in termination of the student’s program.

Note:
Please refer to Registration for regulations governing program registration.

4.10.6 Prepublication
Publication of material before submission of the thesis/report for examination is permitted. The School of Graduate Studies and Supervisor should be informed of such publication.