



**AGENDA OF THE OPEN SESSION  
OF THE MEETING OF SENATE**

Held on Friday, September 14, 2018,  
following the meeting of the Closed Session  
**Room MB 3.210, located on the 3rd Floor of the  
John Molson School of Business Building**  
on the SGW Campus

<b>Item</b>	<b>Presenter/s</b>	<b>Action</b>
1. Call to order	A. Shepard	
1.1 Adoption of the Agenda	A. Shepard	Approval
1.2 Adoption of May 18, 2018 Minutes	A. Shepard	Approval
2. Business arising from the Minutes not included on the Agenda	A. Shepard	
3. President's remarks	A. Shepard	Information
4. Academic update ( <i>Document US-2018-5-D3</i> )	G. Carr	Information
<b>CONSENT AGENDA</b>	A. Shepard	
5. Committee appointments ( <i>Document US-2018-5-D4</i> )		Approval
6. Academic Programs Committee: Report and recommendations ( <i>Document US-2018-5-D5</i> )		Approval
6.1 Undergraduate curriculum changes - Faculty of Engineering and Computer Science		
6.1.1 Department of Computer Science and Software Engineering ( <i>Document US-2018-5-D6</i> )		
6.1.2 Department of Electrical and Computer Engineering ( <i>Document US-2018-5-D7</i> )		
6.1.3 Department of Mechanical, Industrial and Aerospace Engineering ( <i>Document US-2018-5-D8</i> )		

- 6.2 Undergraduate curriculum changes - Faculty of Fine Arts - Department of Music (*Document US-2018-5-D9*)
- 6.3 Graduate curriculum changes - Faculty of Engineering and Computer Science
  - 6.3.1 Department of Computer Science and Software Engineering (*Document US-2018-5-D11*)
  - 6.3.2 Department of Electrical and Computer Engineering (*Documents US-2018-5-D12 and D13*)
  - 6.3.3 Department of Mechanical, Industrial and Aerospace Engineering (*Documents US-2018-5-D14 and D15*)

## REGULAR AGENDA

- |     |   |             |             |
|-----|---|-------------|-------------|
| 7.  | New undergraduate programs – Faculty of Fine Arts – Department of Music – BFA Specialization in Electroacoustic Creative Practices and BFA Specialization in Electroacoustic Recording Arts ( <i>Document US-2018-5-D10</i> ) | R. Duclos   | Approval    |
| 8.  | Annual report of the academic hearing panel ( <i>Document US-2018-5-D16</i> )   | M. Sullivan | Information |
| 9.  | Strategic directions update   | G. Carr     | Information |
| 10. | Question period ( <i>maximum - 15 minutes</i> )   |             |             |
| 11. | Other business  |             |             |
| 12. | Adjournment   | A. Shepard  |             |

**MINUTES OF THE OPEN SESSION**  
**OF THE MEETING OF SENATE**

Held on Friday, May 18, 2018,  
following the meeting of the Closed Session  
in the Norman D. Hébert, LL.D. Meeting Room  
(Room EV 2.260) on the SGW Campus

**PRESENT**

Voting members: Alan Shepard (*Chair*); Paul Allen; Amir Asif; Reena Atanasiadis; Guylaine Beaudry; Pascale Biron; Patrice Blais; Rory Blaisdell; Stephen Brown; Saul Carliner; Graham Carr; Mikaela Clark-Gardner; Anne-Marie Croteau; Ricardo Dal Farra; Christine DeWolf; Charles Draimin; Rebecca Duclos; Christophe Guy; Brigitte Jaumard; David Morris; Harald Proppe; Martin Pugh; Omar Riaz; André Roy; Daniel Salée; Francesca Scala; Yousef Shayan; Ali Sherra; Matt Soar; Robert Soroka; Marc Steinberg; Shaumia Suntharalingam; Leyla Sutherland; Sofière Tahar; Christopher Trueman; Vivek Venkatesh (*Acting for Paula Wood-Adams*); Sharon Yonan Renold

Non-voting members: Joanne Beaudoin; Philippe Beauregard; Denis Cossette; Roger Côté; Bram Freedman; Tom Hughes; Ilze Kraulis; Lisa Ostiguy

**ABSENT**

Voting members: Frank Crooks; Jill Didur; Marcie Frank; Vince Graziano; Tevfik Karatop; Chiranjeevi Koduri; Mahesh Natarajan; Lorraine Oades; Virginia Penhune; John Potvin; Thufile Sirajudeen; Julia Sutera Sardo; Jean-Philippe Warren

Non-voting members: Isabel Dunnigan; Emmet Henchey; Frederica Jacobs

**1. Call to order**

The President called the meeting to order at 2:21 p.m.

**1.1 Approval of Agenda**

R-2018-4-7     *Upon motion duly moved and seconded, it was unanimously resolved that the Agenda of the Open Session be approved.*

## 1.2 Approval of the Minutes of the Open Session meeting of April 20, 2018

Ms. Tessier noted a correction in the 5<sup>th</sup> bullet of item 3 on page 2 with respect to the designation of the granting agencies.

*R-2018-4-8 Upon motion duly moved and seconded, it was unanimously resolved that the Minutes of the Open Session meeting of April 20, 2018 be approved, as corrected.*

## 2. Business arising from the Minutes not included on the Agenda

There was no business arising from the Minutes not included on the Agenda.

## 3. President's remarks

The President's remarks are summarized as follows:

- The University mourns the loss of Gordon Dionne, manager of the Access Centre for Students with Disabilities and a huge advocate for students, who passed away on May 11 following a battle with cancer.
- He thanked all Senators for the work accomplished throughout the year, and in particular, the work done at the standing committee level.
- He congratulated Bram Freedman, who is leaving the University in July, further to his appointment as President and CEO of the Jewish General Hospital Foundation. Me Freedman has been a great advocate of Concordia for over 20 years, and because of his leadership, the Advancement Office is in excellent shape to gear up for the comprehensive campaign.
- He urged Senators to attend the upcoming convocation ceremonies, at which time 11 honorary degrees will be awarded.
- He updated Senate on several research grants and awards received by Concordia faculty members.
- He apprised Senators that the Quebec government had recently announced revisions to the funding for universities. He noted that the University is still studying those revisions, specifying that they do affect current students, nor those who applied for 2018/2019. The most significant change is to funding for international students for 2019/2020. The government will allow the University to retain the "forfaitaire" but will cancel all other grants (teaching, support, land and building). The impact of these changes on the University and the students is still unknown.
- With respect to the guidelines recently released by the Quebec government on how it will assess requests for religious accommodation under Bill 62, the President noted that the University policies will continue to be applied and that no changes are anticipated at the present time. He added that Lisa Ostiguy has been designated as the person responsible for dealing with accommodation requests, as required under the law.

**4. Academic update** (Document US-2018-4-D5)

Referring to his written report, Dr. Carr drew attention to the winners of two prestigious awards, Amir Hooshair who received the NSERC Gilles Brassard Doctoral Prize for Interdisciplinary Research, and Frédérique Laliberté who was awarded a Claudine and Stephen Bronfman Fellowship in Contemporary Art.

**5. Report of Standing Committees**

**5.1 Academic Planning and Priorities** (Document US-2018-4-D6)

**5.2 Finance** (Document US-2018-4-D7)

**5.3 Library** (Document US-2018-4-D8)

No questions were asked in connection with these reports.

**CONSENT**

**6. Committee appointments** (Document US-2018-4-D9)

*R-2018-4-9 That the committee appointments, outlined in Document US-2018-4-D9, be approved*

**7. Academic Programs Committee: Report and recommendations** (Document US-2018-4-D10)

**7.1 Undergraduate curriculum changes – Faculty of Arts and Science**

**7.1.1 Department of Applied Human Science** (Document US-2018-4-D11)

**7.1.2 Department of Classics, Modern Languages and Linguistics** (Document US-2018-4-D12)

**7.1.3 Department of Sociology and Anthropology** (Document US-2018-4-D13)

*R-2018-4-10 That the undergraduate curriculum changes in the Faculty of Arts and Science, outlined in Documents US-2018-4-D11 to D13 be approved, as recommended by the Academic Programs Committee in Document US-2018-4-D10.*

**7.2 Undergraduate curriculum changes – John Molson School of Business – Bachelor of/Baccalaureate in Commerce** (Document US-2018-4-D14)

*R-2018-4-11 That the undergraduate curriculum changes in the John Molson School of Business, outlined in Document US-2018-4-D14 be approved, as recommended by the Academic Programs Committee in Document US-2018-4-D10.*

**REGULAR**

**8. New undergraduate program – John Molson School of Business – BComm Honours in Management** (Document US-2018-4-D15)

Dean Croteau presented the highlights of this new Honours program, which creates an opportunity for the most talented management students to do research in small-business development, sustainability initiatives or leadership and interpersonal relations in larger

firms. The honours designation will enhance the value of their degree and encourage some of these students to pursue graduate work in management.

*R-2018-4-12 Upon motion duly moved and seconded, it was unanimously resolved that the new undergraduate program in the John Molson School of Business, outlined in Document US-2018-4-D15 be approved, as recommended by the Academic Programs Committee in Document US-2018-4-D10.*

**9. Name change of the Department of Exercise Science to the Department of Health, Kinesiology and Applied Physiology (Document US-2018-4-D16)**

Dean Roy introduced this matter while Department Chair Richard Courtemanche outlined the various steps in connection with the extensive consultation process and the in-depth review which was initiated over four years ago, resulting in the proposed name change.

*R-2018-4-13 Upon motion duly moved and seconded, it was unanimously resolved that on recommendation of the Arts and Science Faculty Council, Senate recommend to the Board of Governors the approval of the name change of the Department of Exercise Science to the Department of Health, Kinesiology, and Applied Physiology.*

**10. Presentation on elearning at eConcordia**

Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning, explained the impact of changing demographics on higher education and how online learning can complement traditional classroom delivery. Online learning can help address the increasing interest for lifelong learning and demand for flexibility. It can also provide an opportunity for growth by allowing access to underserved populations and alleviate acute space challenges. Moreover, the development of future skills, such as self-directed learning, time management, new media literacy, and virtual collaboration, are the hallmark of online learning.

Dr. Gabriele provided some statistics with respect to the enrolment in online courses as well as perceptions in relation thereto. She also showed how Concordia compares to other universities with respect to the number of online courses and programs offered.

Robert Beauchemin, President and CEO, said that eConcordia has changed a lot since its establishment in 2001, the most important change being its alignment with the University's strategic directions. For each course, it offers a tailor-made, non-template-based approach as well as a dedicated analysis phase. He also apprised Senate of the University's engagement with the government project eCampus Québec, a virtual provincial campus for the entire province.

Gabriel Rosenbaum, a part-time faculty member in the Department of Physics, presented the development journey and course examples for two courses he teaches online. Jesse Harris, Project Manager, emphasized that the courses are not-template based but custom-fit, aligned with the teaching style and pedagogy of the instructor, in accordance with the

desired learning outcomes. Dr. Rosenbaum conveyed that online courses allow for a broad reach of material which is based on learning objectives as opposed time in the classroom, while allowing a versatility of teaching tools.

In response to questions or comments, the following was clarified:

- ⇒ A Concordia study has demonstrated that if the design and pedagogy is strong, there is no difference whatsoever between online courses and face-to-face courses.
- ⇒ The financial statements of eConcordia and KnowledgeOne will not be presented to Senate, as this is outside of Senate's mandate.
- ⇒ The money generated by KnowledgeOne is rolled back to the University.
- ⇒ About ¾ of Concordia students are taking one online course.
- ⇒ The inability to access or download textbooks purchased once the course has been completed is linked to copyright issues.
- ⇒ The access to course material purchased once the course has been completed depends on the choice of the instructor.

#### 11. Question period

Ms. Clark-Gardner read a statement in which she conveyed student concerns in connection with tuition fee increases which will be presented for approval at the upcoming Board meeting. She noted the lack of student consultation and that requests for information had remained unanswered.

Prof. Shepard explained how tuition fees are regulated by the government, indicating that tuition is not negotiable with student associations. While the University is sensitive to the situation and tries to keep increases at a minimum, he reminded Senators that the University had to absorb four budget cuts over six years totaling \$90 million.

Mr. Blaisdell suggested that more students should participate in the budget conversations and that outreach should be done with student groups to engage them in those conversations. Prof. Shepard agreed that this could be helpful.

#### 12. Other business

There was no other business to bring before Senate.

#### 13. Adjournment

The meeting adjourned at 3:56 p.m.



Danielle Tessier  
Secretary of Senate



## Internal Memorandum

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**To:** Members of Senate  
**From:** Graham Carr, Provost and Vice-President, Academic Affairs  
**Date:** September 6, 2018  
**Re:** Academic Update

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Welcome back!

It's been Summer@Concordia since the last Senate! Lots of recognition events for our faculty and students, incredible research and creative accomplishments, magnificent positioning by some of our student groups. Bravo!

At the end of May, six Concordia faculty members were recognized at the annual Provost's Celebration event. Three new faculty members were inducted into the Provost's Circle, which recognizes major external awards for career achievements:

- Simon Bacon (Health, Kinesiology and Applied Physiology) is world renowned for his research into the role of lifestyle factors and health behaviours in non-communicable chronic diseases, and became a fellow of the Academy of Behavioral Medicine Research in 2017 and the Canadian Cardiovascular Society in 2016;
- Louis Patrick Leroux (English and Études Françaises), whose research contributions to circus studies earned him membership to the College of New Scholars, Artists and Scientists of the Royal Society of Canada last year; and
- Zhibin Ye (Chemical and Materials Engineering) was admitted as a Fellow of the Royal Society of Chemistry in the U.K. for his outstanding contribution to the advancement of chemical sciences.

Two Academic Leadership Awards were given to faculty members who have demonstrated exceptional leadership abilities and accomplished significant administrative achievements:

- Linda Dyer (Management) who recently completed 6 years as department chair. She has also coordinated JMSB's Annual Graduate Research Exposition, been the chief negotiator for the CUFA collective agreement, and held workshops for the Centre for Teaching and Learning and the Women's Faculty Summit.
- Ted Stathopoulos (Building, Civil and Environmental Engineering) was also recognized for running a 38-year marathon of administrative excellence. He has served as president of CUFA, associate dean in the School of Graduate Studies, director for the Centre for Building Studies, and led the CEAB accreditation of all engineering programs offered by ENCS.

Ann English, professor emerita (Chemistry and Biochemistry) and honorary university research chair in bioinorganic chemistry, was the recipient of the Graduate Mentoring Award. She has provided her students with exceptional research training and mentorship, and her students' research, supported by NSERC, CIHR, FRQNT and the private sector, has been published in close to 130 peer-reviewed publications and presented at over 125 national and international lectures.

More than 5,600 Concordia graduates celebrated their success at the Spring convocation, including 32 First Nations, Inuit and Métis graduates who participated in the Indigenous Student Graduation Gathering hosted by the Aboriginal Student Resource Centre (ASRC).

In June we also celebrated The President's Excellence in Teaching Awards, recognizing our colleagues who inspire, challenge and motivate students to hone their critical-thinking and problem-solving skills through exceptional teaching and pedagogical innovations. The 2018 President's Excellence in Teaching Awards recipients were:

- Naftali Cohn (Religions and Cultures)
- Ali Dolatabadi (Mechanical, Industrial and Aerospace Engineering)
- Samie Li Shang Ly (Supply Chain and Business Technology Management)
- Arash Mohammadi (Concordia Institute for Information Systems Engineering)

Over the summer, three new global university rankings celebrated Concordia's place among the world's leading institutions:

- *Times Higher Education* Young University Rankings 2018, Concordia held its spot among the top universities in the world founded over the past five decades. The university placed in the 101-150 bracket out of 250 universities.
- Center for World University Rankings (CWUR) 2018-2019, Concordia was among the top four percent of 18,000 degree-granting institutions of higher education worldwide.
- Concordia placed ninth out of 28 Canadian universities on the CWUR's Alumni Employment indicator, which considers the number university alumni who have held CEO positions at the world's top companies relative to the university's size.
- The 2019 edition of the QS (Quacquarelli Symonds) World University Rankings placed Concordia 464th of 1,011 ranked universities, which is a significant improvement since 2014 especially considering the increasing number of ranked universities.
- QS ranked Concordia 197th in the world for its proportion of international faculty.

Effective June 1, eight faculty members began new terms as Concordia University Research Chairs. Shauna Janssen (Theatre), Mireille Paquet (Political Science), and Hassan Rivaz (Electrical and Computer Engineering) have been awarded as New Scholars. Caroline Roux (Marketing), Dylan Fraser (Biology), and Rolf Wuthrich (Mechanical, Industrial and Aerospace Engineering) were awarded at the Tier 2 level and Bianca Grohmann (Marketing) and Diane Poulin-Dubois (Psychology) were awarded at the Tier 1 level.

We also launched the new Institute for Investigative Journalism, led by Patti Sonntag, a former managing editor in *The New York Times*' News Services division. The institute is the first of its kind in Canada. Headquartered in Concordia's Department of Journalism, it's the host institution for the National Student Investigative Reporting Network, which connects major media outlets with journalism students and faculty from across Canada to investigate and report on large-scale public interest stories.

Concordia's strength in the humanities and social sciences was on full display this summer with the news that 32 university researchers received \$9.1 million in funding from the Social Sciences and Humanities Research Council of Canada (SSHRC). The recipients include Jason Camlot, (English) and Heather Igloliorte (Art History), who each received grants of almost \$2.5M over seven years from the Partnership and Partnership Talent programs. The remainder of the funding was awarded through SSHRC Partnership Development grants, paid out over a three-year period, and Insight grants, distributed over the next two to five years.

With his SSHRC partnership grant, Jason Camlot will work on the SpokenWeb initiative, a project to identify and preserve an extensive body of valuable cultural heritage material. It consists largely of magnetic tape recordings of poetry readings and related conversations from across the country, starting in the mid-1960s. The SSHRC Talent Partnership program focuses on research training activities achieved through connections – with her funding from this program, Heather Igloliorte will develop the Pilimmaksarniq/Pijariuqsarniq Project: Inuit Futures in Arts Leadership to support emerging Inuit academics and arts professionals.

In June, dozens of participants in Enable Montreal, a non-competitive design challenge, unveiled their solutions to some of the obstacles faced daily by people living with disabilities. Enable Montreal was launched last March by Concordia's Office of Community Engagement in partnership with the *Maison de l'innovation sociale*, SHIFT (Concordia's social innovation hub), the Critical Disability Studies Working Group, Independent Living – Montreal and District 3. The challenge culminated with a public showcase at Concordia. Over three months, 10 teams – composed of disability rights activists, engineers, designers, professionals and Concordia student and faculty – worked on prototypes designed to address specific disability-related mandates.

In late July, TAG hosted the annual Critical Hit summer school in collaboration with Indienova, China's largest indie game portal. Critical Hit (a summer game incubator program known for a fast-paced iterative approach to prototyping experimental games) has attracted international attention in recent years and this was the first time TAG ran the program with an international partner. A large corps of Chinese game-design students attended, and the program concluded with a playtesting event on Milieux's terrace.

Donna Kahérakwas Goodleaf, who joined Concordia's Centre for Teaching and Learning in January 2018 as its Indigenous curriculum and pedagogical advisor, has been developing and implementing university-wide training on decolonizing and Indigenizing the academy. She is working with faculty members to re-centre their curriculum in ways that promote critical discourse, analysis and integration of Indigenous histories, perspectives, philosophies and pedagogies. To begin this process, she has organized the *Seminar Series on Decolonizing and Indigenizing the Academy*, a monthly faculty training workshop that runs from August to December. Faculty can click on [this link](#) for more information and registration details.

On August 28, twenty new faculty members from all Faculties participated in the Research Orientation for New Faculty Hires. Information was provided on a wide range of research-related activities such as graduate student supervision, grants development and management, and research integrity.

On August 29, the annual Celebration of Research Excellence was held. The event honours new and renewed Canada Research Chairs, new Concordia University Research Chairs, winners of the University Research Awards and the Petro-Canada Young Innovator Awards, as well as faculty members receiving external recognition or awards for research activity.

Five doctoral graduate students are among the recipients of this year's prestigious Vanier Canada Graduate Scholarships: Jean-Philippe Gagné (Clinical Psychology), Maya Hey (Communication Studies), Caroline Trottier-Gascon (History), Sherif Goubran (INDI) and Cássia Reis Donato (Political Science). Each award is valued at \$150,000, awarded over three years, and this year, all of Concordia's recipients are funded through the Social Sciences and Humanities Research Council (SSHRC). The research topics range from preventing violence against youth to the experiences of trans people in Montreal.

Adam Crane is a Banting postdoctoral fellow and is collaborating with Grant Brown (Biology), studying fish behaviour to try to better understand how social influences interact with fear and fear recovery, or PTSD. Crane's research looks at predator avoidance among freshwater fish in environments with a high level of predation risk and compares these findings to humans with PTSD. There are 70 Bantings annually awarded, valued at \$140,000, or \$70,000 per year for two years.

To date, the PERFORM Centre has welcomed 52 participants to the R Howard Webster Healthy Living Program for Seniors including a strong cohort from the Chinese community. Student volunteers who spoke Mandarin served as translators to enhance participant interaction. In collaboration with engAGE (Concordia Centre for research on Aging) and professors from the Department of Applied Human Sciences, a leisure education component will be introduced to future cohorts to empower seniors to identify and engage with leisure opportunities in their communities.

Tamara Cohen, the R. Howard Webster Scientist in nutrition, lifestyle research and bio-imaging, and PERFORM Scientist, Maryse Fortin, have initiated research and training projects as part of their mandate to investigate the effects of daily routines on long-term health through innovative uses of imaging techniques. The research projects include "Evaluating nutrition program for seniors, and validating eating behaviour questionnaire in adults."

With an increased focus on Summer@Concordia, Concordia offered over 50 activities over the past months, ranging from a summer institute on hate speech, an acting workshop, experiential learning in contemporary circus practice, an aircraft certification flight test course and six Summer Schools Abroad:

- *Summer Spanish Language and Culture Program* at the University of Santiago de Compostela, Spain;

- *Fine Arts in Colombia* at the Universidad de Caldas in Manizales, Colombia;
- *Imagining Iceland* at the Icelandic Textile Centre;
- *Azrieli Institute Summer in Jerusalem* at the Hebrew University;
- *Theatre in Germany* at the University of Erlangen; and
- *Summer Graduate Workshop in Film Studies* at the University of Genoa.

And finally, this summer Lisa Ostiguy assumed the new position of Special Advisor to the Provost on Campus Life at Concordia. This role was created to strengthen the delivery of services and programs, and improve policies and processes to foster a safe, accessible, diverse, inclusive and respectful campus. Anne Whitelaw stepped into the role of Deputy Provost, in addition to her current position as Vice-Provost for Planning and Positioning. Isabel Dunnigan has taken on the role of Associate Vice-President of Lifelong Learning in addition to her current position as Executive Director of the Center for Continuing Education.





COMMITTEE APPOINTMENTS

<u>Committee</u>	<u>Appointee</u>	<u>Term</u>
Academic Planning and Priorities	Sarah Abou-Bakr (CSU)	2018/2019
	Luigi Allemanno (FA)	2018/2021
	Mikaela Clark-Gardner (CSU)	2018/2019
	Lea Katsanis (JMSB)	2018/2021
	Rashmikka Sethu Madhavan (GSA)	2018/2019
Academic Programs	Sarah Mazhero (CSU)	2018/2019
	Shaina Ali (GSA)	2018/2019
	Tieshan Li (JMSB)	2018/2021
Distinguished Professor Emeritus	Gilles Peslherbe (A&S)	2018/2021
	Ira Robinson (A&S)	2018/2021
	Sherry Simon (A&S)	2018/2021
Finance	Gene Gibbons (FA)	2018/2021
	Rashmikka Sethu Madhavan (GSA)	2018/2019
	Ali Sherra (CSU)	2018/2019
Library	Graham Dodds (A&S)	2018/2021
	Sami Al-Hanbali (CSU)	2018/2019
	Fuzhan Nasiri (ENCS)	2018/2021
	Zenobia Pais (GSA)	2018/2019
	Safa Sheikh (CSU)	2018/2019
Research	Shaina Ali (GSA)	2018/2019
	Hua Ge (ENCS)	2018/2021
	Jean-Gabriel Lacombe (CSU)	2018/2019
	Zenobia Pais (GSA)	2018/2019
Special Graduation Awards	Mathilde Braems (CSU)	2018/2019
	Zenobia Pais (GSA)	2018/2019
Steering	Rory Blaisdell (CSU)	2018/2019
	Mikaela Clark-Gardner (CSU)	2018/2019
	Nafisa Tabassum Jamal (GSA)	2018/2019

**Appointments requiring  
Senate ratification**

**Appointee**

**Term**

Faculty Tribunal Pool

Elizabeth Bloodgood (A&S)  
Mark Corwin (FA)

2018/2020  
2018/2020

*September 7, 2018*

**ACADEMIC PROGRAMS COMMITTEE  
REPORT TO SENATE  
Sandra Gabriele, PhD  
September 14, 2018**

**The Academic Programs Committee requests that Senate consider the following undergraduate changes for the 2019-20 Undergraduate Calendar:**

Following approval of Faculty Councils, on **May 24, 2018** APC members reviewed the undergraduate curriculum submissions from the Faculty of Engineering and Computer Science and the Faculty of Fine Arts. As a result of discussions APC resolved that the following undergraduate curriculum proposals be forwarded to Senate for approval:

**Faculty of Engineering and Computer Science**

Department of Computer Science and Software Engineering (For January 2019 Implementation)  
**(US-2018-5-D6)**

*[The proposal involves introducing two new special topics courses; converting a slot course to a permanent offering; and subsequently updating the Software Engineering list of electives.]*

- BCompSc in Computer Science
- BEng in Software Engineering
- Course Offerings
- Requirements

Department of Electrical and Computer Engineering (For May 2019 Implementation)  
**(US-2018-5-D7)**

*[The proposal involves revising the prerequisites of two courses; converting a slot course to a permanent offering; and adding courses to the lists of electives.]*

- BEng in Computer Engineering
- BEng in Electrical Engineering
- Course Offerings
- Requirements

Department of Mechanical, Industrial and Aerospace Engineering (For May 2019 Implementation)  
**(US-2018-5-D8)**

*[The proposal involves removing the tutorial from two courses; and adding courses to the Mechanical Engineering list of electives.]*

- BEng in Aerospace Engineering
- BEng in Mechanical Engineering
- Course Offerings
- Requirements

**Faculty of Fine Arts**

Department of Music (For September 2019 Implementation) **(US-2018-5-D9)**

*[The proposal involves revising the requirements of four programs; updating course titles, descriptions, prerequisites and notes; renumbering three courses; reducing the credit value of two courses; introducing eight new courses and deleting 12 courses allowing for the removal of outdated content, certain content to be added to other courses, and for the choir courses to be identified separately as University Choir and Chamber Choir.]*

- BFA Specialization in Jazz Studies

- BFA Major in Music
- BFA Specialization in Music Composition
- BFA Specialization in Music Performance
- Courses
- Course Offerings
- Requirements

Department of Music (For September 2019 Implementation) **(US-2018-5-D10)**

*[The proposal involves introducing two new specialization programs; revising program requirements; updating course descriptions, prerequisites and notes; and editorial changes.]*

- BFA Specialization in Electroacoustic Creative Practices – **New Program**
- BFA Specialization in Electroacoustic Recording Arts – **New Program**
- Minor in Electroacoustic Studies
- Courses
- Course Offerings
- Editorial
- Regulations
- Requirements

**The Academic Programs Committee requests that Senate consider the following graduate changes for the Winter 2019 Graduate Calendar:**

Following approval of Faculty Council and the Graduate Curriculum Committee, on **May 24, 2018** APC members reviewed the graduate curriculum submissions from the Faculty of Engineering and Computer Science. As a result of discussions APC resolved that the following graduate curriculum proposal be forwarded to Senate for approval:

**Faculty of Engineering and Computer Science**

Department of Computer Science and Software Engineering (For January 2019 Implementation) **(US-2018-5-D11)**

*[The proposal involves updating the degree requirements of two programs; converting two slot courses to permanent offerings; and updating course lists to reflect the new courses.]*

- Master of/Magisteriate in Applied Science (Software Engineering)
- Master of/Magisteriate in Computer Science
- Course Offerings
- Requirements

Department of Electrical and Computer Engineering (For January 2019 Implementation) **(US-2018-5-D12)**

*[The proposal involves revising the title and description of a course and reflecting the change in the relevant topic area course list; and revising another course by updating its description and adding a prerequisite.]*

- Master of/Magisteriate in Applied Science (Electrical and Computer Engineering)
- Master of/Magisteriate in Engineering (Electrical and Computer Engineering)
- Doctor of/Doctorate in Philosophy (Electrical and Computer Engineering)
- Course Offerings
- Requirements

Department of Electrical and Computer Engineering (For January 2019 Implementation)  
**(US-2018-5-D13)**

*[The proposal involves converting a slot course to a permanent offering and listing the new course in the relevant topic area course list.]*

- Master of/Magisteriate in Applied Science (Electrical and Computer Engineering)
- Master of/Magisteriate in Engineering (Electrical and Computer Engineering)
- Doctor of/Doctorate in Philosophy (Electrical and Computer Engineering)
- Course Offering
- Requirements

Department of Mechanical, Industrial and Aerospace Engineering  
(For January 2019 Implementation) **(US-2018-5-D14)**

*[The proposal involves the introduction of two new courses and listing the new courses in the relevant course lists.]*

- Master of/Magisteriate in Engineering (Aerospace)
- Requirements
- Course Offerings

Department of Mechanical, Industrial and Aerospace Engineering  
(For January 2019 Implementation) **(US-2018-5-D15)**

*[The proposal involves introducing a new course; converting two slot courses to permanent offerings; updating two course descriptions and a course title; and reflecting the changes in the relevant topic area course list.]*

- Master of/Magisteriate in Applied Science (Industrial Engineering)
- Master of/Magisteriate in Engineering (Industrial Engineering)
- Doctor of/Doctorate in Philosophy (Industrial Engineering)
- Course Offerings
- Requirements



Sandra Gabriele, PhD  
Vice-Provost, Innovation in Teaching and Learning  
29 August 2018



**FACULTY OF ENGINEERING  
AND COMPUTER SCIENCE**

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**INTERNAL MEMORANDUM**

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**TO:** Dr. Sandra Gabriele, Vice- Provost, Innovation in Teaching and Learning

**FROM:** Dr. A. Asif, Dean; Chair, ENCS Faculty Council

**DATE:** April 27, 2018

**RE:** Changes to the undergraduate program in the CSE Department

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Please find attached a curriculum package for the undergraduate program in the Department of Computer Science and Software Engineering. The Department proposes to add SOEN 498, 499 and to introduce a new course COMP 425 under the list of electives in the Software Engineering program. Hence, a lab instructor will be hired for the new course by the Department and the cost will be covered by Faculty of Engineering and Computer Science.

SOEN 498	Topics in Software Engineering (3 credits)
SOEN 499	Topics in Software Engineering (4 credits)
COMP 425	Computer Vision (4 credits)

This proposal passed the ENCS Undergraduate Studies Committee on February 14, 2018 as well as the Faculty Council on April 13, 2018. I would be grateful if you could put it on the agenda of the next APC meeting.

INTERNAL MEMORANDUM

TO: Ali Akgunduz, Associate Dean, Academic Programs, Faculty of Engineering and Computer Science

FROM: Dr. S. Mudur, Chair Department of Computer Science and Software Engineering

DATE: Monday, February 12, 2018

SUBJECT: Proposed minor curriculum updates.

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Below, please find the list of CSE updates for the coming year.

- We would like to explicitly include the slot courses SOEN 498 and SOEN 499 in the list of electives that may be taken by SOEN undergrads.
- We would like to convert a slot course, COMP 425 Computer Vision, into a permanent course for next year and it will be part of the faculty member's regular teaching load. Hence, a lab instructor will be hired by the department and the cost will be covered by the Faculty.

These changes have been approved by the COMP and SOEN Curriculum Committees, as well as the Department Council, as of February 12, 2018.

We would be grateful if you could put this on the agenda of the next ENCS Undergraduate Studies Committee meeting.

**DOSSIER TITLE:** comp-91

**DESCRIPTION OF CHANGE:** Explicit addition of SOEN electives

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020

**Implementation Month/Year:** January 2019

**Faculty:** Faculty of Engineering and Computer Science

**Department:** Computer Science and Software Engineering

**Program:** Software Engineering

**Degree:** BEng

**Section Title:** 71.70.9

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

Editorial                       Requirements                       Regulations  
 New Program                       Program Deletion

Present Text (Text from 2018 – 2019 Calendar)			Proposed Text		
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.					
<b>Electives</b>		<i>Credits</i>	<b>Electives</b>		<i>Credits</i>
COMP 345	Advanced Program Design with C++	4.00	COMP 345	Advanced Program Design with C++	4.00
COMP 353	Databases	4.00	COMP 353	Databases	4.00
COMP 371	Computer Graphics	4.00	COMP 371	Computer Graphics	4.00
COMP 426	Multicore Programming	4.00	<u>COMP 425</u>	<u>Computer Vision</u>	<u>4.00</u>
COMP 428	Parallel Programming	4.00	COMP 426	Multicore Programming	4.00
COMP 442	Compiler Design	4.00	COMP 428	Parallel Programming	4.00
COMP 445	Data Communication and Computer Networks	4.00	COMP 442	Compiler Design	4.00
COMP 451	Database Design	4.00	COMP 445	Data Communication and Computer Networks	4.00
COMP 465	Design and Analysis of Algorithms	3.00	COMP 451	Database Design	4.00
COMP 472	Artificial Intelligence	4.00	COMP 465	Design and Analysis of Algorithms	3.00
COMP 473	Pattern Recognition	4.00	COMP 472	Artificial Intelligence	4.00
COMP 474	Intelligent Systems	4.00	COMP 473	Pattern Recognition	4.00
COMP 478	Image Processing	4.00	COMP 474	Intelligent Systems	4.00
COMP 479	Information Retrieval and Web Search	4.00	COMP 478	Image Processing	4.00
SOEN 298	System Hardware Lab	1.00	COMP 479	Information Retrieval and Web Search	4.00
SOEN 422	Embedded Systems and Software	4.00	SOEN 298	System Hardware Lab	1.00
SOEN 423	Distributed Systems	4.00	SOEN 422	Embedded Systems and Software	4.00
SOEN 448	Management of Evolving Systems	3.00	SOEN 423	Distributed Systems	4.00

SOEN 491	Software Engineering Project	1.00	SOEN 448	Management of Evolving Systems	3.00
ENGR 411	Special Technical Report	1.00	SOEN 491	Software Engineering Project	1.00
			<a href="#">SOEN 498</a>	<a href="#">Topics in Software Engineering</a>	<a href="#">3.00</a>
			<a href="#">SOEN 499</a>	<a href="#">Topics in Software Engineering</a>	<a href="#">4.00</a>
			ENGR 411	Special Technical Report	1.00

**Rationale:** Currently, there is no explicit indication that SOEN 498/SOEN 499 can be used as electives in the Software Engineering program. The Computer Science portion of the Calendar clearly indicates that the COMP 498/COMP 499 slot courses can be utilized as electives, so this change simply provides the same direction for Software Engineering students.

COMP 425 was offered as a slot course and is now proposed as a permanent course to be included under the list of electives.

**Resource Implications:** None.

**DOSSIER TITLE:** comp-91  
**COURSE NUMBER:** COMP 425  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020  
**Implementation Month/Year:** January 2019

**Faculty:** ENCS

**Department:** Computer Science and Software Engineering

**Program:** Computer Science and Software Engineering

**Degree:** BCompSc, BEng

**Section Title:** 71.70.10

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 20XX – 20XX Calendar)	Proposed Text
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>COMP 425 Computer Vision</b> (4 credits)            This course introduces basic techniques and concepts in computer vision including image formation, grouping and fitting, geometric vision, recognition, perceptual organization, and the state-of-the art software tools. Students learn fundamental algorithms and techniques, and gain experience in programming vision-based components; in particular, how to program in OpenCV, a powerful software interface used to process data captured from passive and active sensors. A project is required. Laboratory: two hours per week.  <i>Note: Students who have received credit for this topic under COMP 498/499 may not take this course for credit.</i></p>
<p><b>Rationale:</b> This is a slot course that has now been offered in January 2016, January 2017 and January 2018. The course appears to be popular with students – after an initial offering with 15 students the course has been at its capacity of 30 students for the past two cycles, including the current semester. This course is going to be cross-listed with COMP 6341 which is proposed in comp-90.</p> <p>The material covered in this course is the same for undergraduates and graduates. The difference is in the requirements for the assignments/project. The graduate students have more questions/tasks to answer/implement than the undergraduates. For example in one of the assignments, the undergraduates had the option to implement any of the last five questions for extra credit. For the graduates, the first two questions were compulsory and the remaining three questions were for extra credit. It should be noted that generally the difficulty level is much higher for the compulsory graduate questions.</p>	

**Resource Implications:** A lab instructor will be hired by the department and the course will be part of the faculty member's regular teaching load. The Dean agrees to cover the cost.

**Other Programs within which course is listed:** None

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**INTERNAL MEMORANDUM**

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**TO:** Dr. Sandra Gabriele, Vice- Provost, Innovation in Teaching and Learning

**FROM:** Dr. A. Asif, Dean; Chair, ENCS Faculty Council

**DATE:** April 27, 2018

**RE:** Changes to the undergraduate programs in the ECE Department

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Please find attached the curriculum changes for the undergraduate programs in the Department of Electrical and Computer Engineering.

**Electrical Engineering Electives:**

Add a new course, ELEC 445 Biological Signal Processing (3 credits), to Biological and Biomedical Engineering Electives. Students will use free software to process data and the course will be part of the faculty member's regular teaching load.

**Computer Engineering Electives:**

1. A new course, ELEC 445 Biological Signal Processing (3 credits), is added to the following option electives and list of electives. Students will use free software to process data and the course will be part of the faculty member's regular teaching load.
  - Biological and Biomedical Engineering Option Electives
  - Biological and Biomedical Engineering Electives
2. Add the course SOEN 321 Information Systems Security (3 credits) to the Computer Science and Software Engineering electives.
3. Add the following courses to the Telecommunications, Networks and Signal Processing electives
  - COEN 446 Internet of Things (3 credits)
  - COEN 447 Software-Defined Networking (3 credits)

**Other Changes:**

1. Revise prerequisite of COEN 244 Programming Methodology II (3 credits) and COEN 434 Microfluidics Devices for Synthetic Biology (3 credits). There are no resource implications.

This proposal passed the ENCS Undergraduate Studies Committee on March 28, 2018 as well as the Faculty Council on April 13, 2018. I would be grateful if you could put it on the agenda of the next APC meeting.

## INTERNAL MEMORANDUM

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**DATE:** March 23, 2018

**TO:** Dr. A. Akgunduz, Associate Dean, Academic Programs  
Faculty of Engineering and Computer Science

**FROM:** Dr. W.E. Lynch, Chair  
Department of Electrical and Computer Engineering

**SUBJECT:** **Undergraduate Changes 2019**

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Please find enclosed Dossier #3 submitted by the Department of Electrical and Computer Engineering.

The Department proposed to change pre-requisites and course description of the following courses. These changes will provide adequate experiences to students and improve skills taking courses in electrical and computer engineering.

### **COEN 244 and 434**

This curriculum package is aimed at upgrading the Electrical & Computer Engineering Option and Elective Program. New courses have been added to these options.

New course added to these options and electives list are the following;

### **ELEC 445**

- 1. Biological and Biomedical Engineering for Electrical Engineering**
- 2. Biological and Biomedical Engineering Electives for Computer Engineering**
- 3. Biological and Biomedical Engineering (BME) Option Electives for Computer Engineering**

The Department has also added courses aimed at upgrading the Electrical & Computer Engineering Elective Program. Courses added to the elective lists are the following;

### **COEN 446, 447 and SOEN 321**

- 1. Computer Science and Software Engineering Electives for Computer Engineering**
- 2. Telecommunications, Networks and Signal Processing Electives for Computer Engineering**

These changes have been approved at the Department Curriculum Committee meeting held October 17, 2017, January 15, 2018, March 12, 2018 and at the Department Council meeting held January 26, 2018, February 12, 2018, and March 23, 2018.

I would be grateful if you could put this on the agenda of the next ENCS Undergraduate Studies Committee meeting.

**DOSSIER TITLE: elec-102**

**DESCRIPTION OF CHANGE: Electrical Engineering Electives**

**PROGRAM CHANGE - CALENDAR UPDATE FORM**

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019//2020

Implementation Month/Year: May 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program** Electrical Engineering

**Degree:** B.Eng.

**Section Title:** 71.30.1

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Editorial
- Requirements
- Regulations
- New Program
- Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text																																																										
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<p><b>71.30.1 Course Requirements (BEng in Electrical Engineering)</b></p> <p>The program in Electrical Engineering consists of the Engineering Core, the Electrical Engineering Core, and one of five choices as set out below. The normal length of the program is 120 credits.</p> <p><b>Engineering Core</b> (30.5 credits) See §71.20.5.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Electrical Engineering Core</th> <th style="text-align: right;">Credits</th> </tr> </thead> <tbody> <tr><td>COEN 212 Digital Systems Design I</td><td style="text-align: right;">3.50</td></tr> <tr><td>COEN 231 Introduction to Discrete Mathematics</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 243 Programming Methodology I</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 244 Programming Methodology II</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 311 Computer Organization and Software</td><td style="text-align: right;">3.50</td></tr> <tr><td>ELEC 242 Continuous-Time Signals and Systems</td><td style="text-align: right;">3.00</td></tr> <tr><td>ELEC 251 Fundamentals of Applied Electromagnetics</td><td style="text-align: right;">3.00</td></tr> <tr><td>ELEC 311 Electronics I</td><td style="text-align: right;">3.50</td></tr> <tr><td>ELEC 312 Electronics II</td><td style="text-align: right;">3.50</td></tr> <tr><td>ELEC 321 Introduction to Semiconductor Materials and Devices</td><td style="text-align: right;">3.50</td></tr> <tr><td>ELEC 331 Fundamentals of Electrical Power Engineering</td><td style="text-align: right;">3.50</td></tr> <tr><td>ELEC 342 Discrete-Time Signals and Systems</td><td style="text-align: right;">3.50</td></tr> <tr><td>ELEC 351 Electromagnetic Waves and Guiding Structures</td><td style="text-align: right;">3.00</td></tr> </tbody> </table>	Electrical Engineering Core	Credits	COEN 212 Digital Systems Design I	3.50	COEN 231 Introduction to Discrete Mathematics	3.00	COEN 243 Programming Methodology I	3.00	COEN 244 Programming Methodology II	3.00	COEN 311 Computer Organization and Software	3.50	ELEC 242 Continuous-Time Signals and Systems	3.00	ELEC 251 Fundamentals of Applied Electromagnetics	3.00	ELEC 311 Electronics I	3.50	ELEC 312 Electronics II	3.50	ELEC 321 Introduction to Semiconductor Materials and Devices	3.50	ELEC 331 Fundamentals of Electrical Power Engineering	3.50	ELEC 342 Discrete-Time Signals and Systems	3.50	ELEC 351 Electromagnetic Waves and Guiding Structures	3.00	<p><b>71.30.1 Course Requirements (BEng in Electrical Engineering)</b></p> <p>The program in Electrical Engineering consists of the Engineering Core, the Electrical Engineering Core, and one of five choices as set out below. 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ELEC 365	Complex Variables and Partial Differential Equations	3.00
ELEC 367	Introduction to Digital Communications	3.50
ELEC 372	Fundamentals of Control Systems	3.50
ELEC 390	Electrical Engineering Product Design Project	3.00
ELEC 490	Capstone Electrical Engineering Design Project	4.00
ENGR 290	Introductory Engineering Team Design Project	3.00
		62.50

**Students may choose one of the following options:**

- I. Electronics/VLSI Option
  - II. Telecommunications Option
  - III. Power and Renewable Energy Option
  - IV. Avionics and Control Option
- Otherwise, students must follow V.

<b>I. Electronics/VLSI Option</b>	<i>Credits</i>
COEN 315 Digital Electronics	3.50
COEN 451 VLSI Circuit Design	4.00
Minimum number of Elective credits: at least 7.5 of these 19.5 credits must be taken from the Electronics/VLSI Option Electives list. The rest may be chosen from the Electrical Engineering Electives list.	19.50

27.00

<b>Electronics/VLSI Option Electives</b>	<i>Credits</i>
COEN 313 Digital Systems Design II	3.50
COEN 413 Hardware Functional Verification	3.00
ELEC 413 Mixed-Signal VLSI for Communication Systems	4.00
ELEC 421 Solid State Devices	3.50
ELEC 422 Design of Integrated Circuit Components	3.50
ELEC 423 Introduction to Analog VLSI	4.00
ELEC 424 VLSI Process Technology	3.50
ELEC 425 Optical Devices for High-Speed Communications	3.50
ELEC 433 Power Electronics	3.50

	Equations	
ELEC 367	Introduction to Digital Communications	3.50
ELEC 372	Fundamentals of Control Systems	3.50
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COEN 315 Digital Electronics	3.50
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27.00

<b>Electronics/VLSI Option Electives</b>	<i>Credits</i>
COEN 313 Digital Systems Design II	3.50
COEN 413 Hardware Functional Verification	3.00
ELEC 413 Mixed-Signal VLSI for Communication Systems	4.00
ELEC 421 Solid State Devices	3.50
ELEC 422 Design of Integrated Circuit Components	3.50
ELEC 423 Introduction to Analog VLSI	4.00
ELEC 424 VLSI Process Technology	3.50
ELEC 425 Optical Devices for High-Speed Communications	3.50
ELEC 433 Power Electronics	3.50

ELEC 441	Modern Analog Filter Design	3.50
ELEC 442	Digital Signal Processing	3.50
<b>II. Telecommunications Option</b>		<i>Credits</i>
ELEC 463	Telecommunication Networks	3.50
ELEC 464	Wireless Communications	3.00
	Minimum number of Elective credits:	20.50
	at least 9 of these 20.5 credits must be taken from the Telecommunications Option Electives list. The rest may be chosen from the Electrical Engineering Electives list.	
		<hr/> 27.00
<b>Telecommunications Option Electives</b>		<i>Credits</i>
COEN 446	Internet of Things	3.00
COEN 447	Software-Defined Networking	3.00
ELEC 413	Mixed-Signal VLSI for Communication Systems	4.00
ELEC 425	Optical Devices for High-Speed Communications	3.50
ELEC 442	Digital Signal Processing	3.50
ELEC 453	Microwave Engineering	3.50
ELEC 456	Antennas	3.50
ELEC 457	Design of Wireless RF Systems	3.00
ELEC 465	Networks Security and Management	3.50
ELEC 466	Introduction to Optical Communication Systems	3.50
ELEC 470	Broadcast Signal Transmission	3.00
ELEC 472	Advanced Telecommunication Networks	3.50
<b>III. Power and Renewable Energy Option</b>		<i>Credits</i>
ELEC 433	Power Electronics	3.50
ELEC 437	Renewable Energy Systems	3.00
ELEC 440	Controlled Electric Drives	3.50
ELEC 481	Linear Systems	3.50
	Minimum number of Elective credits:	13.50
	at least 3 of these 13.5 credits must be taken from the Power and Renewable Energy Option Electives list. The rest may be chosen from the Electrical Engineering	

ELEC 441	Modern Analog Filter Design	3.50
ELEC 442	Digital Signal Processing	3.50
<b>II. Telecommunications Option</b>		<i>Credits</i>
ELEC 463	Telecommunication Networks	3.50
ELEC 464	Wireless Communications	3.00
	Minimum number of Elective credits:	20.50
	at least 9 of these 20.5 credits must be taken from the Telecommunications Option Electives list. The rest maybe chosen from the Electrical Engineering Electives list.	
		<hr/> 27.00
<b>Telecommunications Option Electives</b>		<i>Credits</i>
COEN 446	Internet of Things	3.00
COEN 447	Software-Defined Networking	3.00
ELEC 413	Mixed-Signal VLSI for Communication Systems	4.00
ELEC 425	Optical Devices for High-Speed Communications	3.50
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ELEC 470	Broadcast Signal Transmission	3.00
ELEC 472	Advanced Telecommunication Networks	3.50
<b>III. Power and Renewable Energy Option</b>		<i>Credits</i>
ELEC 433	Power Electronics	3.50
ELEC 437	Renewable Energy Systems	3.00
ELEC 440	Controlled Electric Drives	3.50
ELEC 481	Linear Systems	3.50

Electives list.

27.00

**Power and Renewable Energy Option Electives**

ELEC 430	Electrical Power Equipment*	3.50
ELEC 431	Electrical Power Systems	3.50
ELEC 432	Control of Electrical Power Conversion Systems*	3.50
ELEC 434	Behaviour of Power Systems*	3.50
ELEC 435	Electromechanical Energy Conversion Systems	3.50
ELEC 436	Protection of Power Systems*	3.50
ELEC 438	Industrial Electrical Systems*	3.50
ELEC 439	Hybrid Electric Vehicle Power System Design and Control	3.00
ELEC 442	Digital Signal Processing	3.50
ELEC 482	System Optimization	3.50
ELEC 483	Real-Time Computer Control Systems	3.50

\*Note: ELEC 430, 432, 434, 436, and 438 are usually offered in the French language.

**IV. Avionics and Control Option**

*Credits*

AERO 417	Standards, Regulations and Certification	3.00
AERO 480	Flight Control Systems	3.50
AERO 482	Avionic Navigation Systems	3.00
AERO 483	Integration of Avionics Systems	3.00
ELEC 483	Real-Time Computer Control Systems	3.50
	Minimum number of Elective credits:	11.00

Electives must be chosen from the Electrical Engineering Electives list.

27.00

*Credits*

**V. For Students NOT Selecting an option:**

**General Stream**

COEN 313	Digital Systems Design II	3.50
COEN 352	Data Structures and Algorithms	3.00
ELEC 463	Telecommunication Networks	3.50
	Minimum number of Elective credits:	17.00

Electives must be chosen from the Electrical

Minimum number of Elective credits: 13.50

at least 3 of these 13.5 credits must be taken from the

Power and Renewable Energy Option Electives list. The rest may be chosen from the Electrical Engineering Electives list.

27.00

**Power and Renewable Energy Option Electives**

*Credits*

ELEC 430	Electrical Power Equipment*	3.50
ELEC 431	Electrical Power Systems	3.50
ELEC 432	Control of Electrical Power Conversion Systems*	3.50
ELEC 434	Behaviour of Power Systems*	3.50
ELEC 435	Electromechanical Energy Conversion Systems	3.50
ELEC 436	Protection of Power Systems*	3.50
ELEC 438	Industrial Electrical Systems*	3.50
ELEC 439	Hybrid Electric Vehicle Power System Design and Control	3.00
ELEC 442	Digital Signal Processing	3.50
ELEC 482	System Optimization	3.50
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**IV. Avionics and Control Option**

*Credits*

AERO 417	Standards, Regulations and Certification	3.00
AERO 480	Flight Control Systems	3.50
AERO 482	Avionic Navigation Systems	3.00
AERO 483	Integration of Avionics Systems	3.00
ELEC 483	Real-Time Computer Control Systems	3.50
	Minimum number of Elective credits:	11.00

Electives must be chosen from the Electrical Engineering Electives list.

27.00

Engineering Electives list.

27.00

**Electrical Engineering Electives**

Courses are listed in groups to facilitate course selection. With adequate academic justification and with permission of the Department, students may take one technical elective course from the Computer Engineering Electives list.

**A. Communications and Signal Processing** *Credits*

COEN 446	Internet of Things	3.00
COEN 447	Software-Defined Networking	3.00
ELEC 441	Modern Analog Filter Design	3.50
ELEC 442	Digital Signal Processing	3.50
ELEC 463	Telecommunication Networks	3.50
ELEC 464	Wireless Communications	3.00
ELEC 465	Networks Security and Management	3.50
ELEC 466	Introduction to Optical Communication Systems	3.50
ELEC 470	Broadcast Signal Transmission	3.00
ELEC 472	Advanced Telecommunication Networks	3.50

**B. Electronics/VLSI** *Credits*

COEN 315	Digital Electronics	3.50
COEN 413	Hardware Functional Verification	3.00
COEN 451	VLSI Circuit Design	4.00
ELEC 413	Mixed-Signal VLSI for Communication Systems	4.00
ELEC 421	Solid State Devices	3.50
ELEC 422	Design of Integrated Circuit Components	3.50
ELEC 423	Introduction to Analog VLSI	4.00
ELEC 424	VLSI Process Technology	3.50
ELEC 425	Optical Devices for High-Speed Communications	3.50

**C. Power** *Credits*

**V. For Students NOT Selecting an option:  
General Stream**

*Credits*

COEN 313	Digital Systems Design II	3.50
COEN 352	Data Structures and Algorithms	3.00
ELEC 463	Telecommunication Networks	3.50
Minimum number of Elective credits:		17.00
Electives must be chosen from the Electrical Engineering Electives list.		

27.00

**Electrical Engineering Electives**

Courses are listed in groups to facilitate course selection. With adequate academic justification and with permission of the Department, students may take one technical elective course from the Computer Engineering Electives list.

**A. Communications and Signal Processing** *Credits*

COEN 446	Internet of Things	3.00
COEN 447	Software-Defined Networking	3.00
ELEC 441	Modern Analog Filter Design	3.50
ELEC 442	Digital Signal Processing	3.50
ELEC 463	Telecommunication Networks	3.50
ELEC 464	Wireless Communications	3.00
ELEC 465	Networks Security and Management	3.50
ELEC 466	Introduction to Optical Communication Systems	3.50
ELEC 470	Broadcast Signal Transmission	3.00
ELEC 472	Advanced Telecommunication Networks	3.50

**B. Electronics/VLSI** *Credits*

COEN 315	Digital Electronics	3.50
COEN 413	Hardware Functional Verification	3.00
COEN 451	VLSI Circuit Design	4.00
ELEC 413	Mixed-Signal VLSI for Communication Systems	4.00
ELEC 421	Solid State Devices	3.50
ELEC 422	Design of Integrated Circuit Components	3.50
ELEC 423	Introduction to Analog VLSI	4.00

ELEC 430	Electrical Power Equipment*	3.50
ELEC 431	Electrical Power Systems	3.50
ELEC 432	Control of Electrical Power Conversion Systems*	3.50
ELEC 433	Power Electronics	3.50
ELEC 434	Behaviour of Power Systems*	3.50
ELEC 435	Electromechanical Energy Conversion Systems	3.50
ELEC 436	Protection of Power Systems*	3.50
ELEC 437	Renewable Energy Systems	3.00
ELEC 438	Industrial Electrical Systems*	3.50
ELEC 439	Hybrid Electric Vehicle Power System Design and Control	3.00
ELEC 440	Controlled Electric Drives	3.50
*Note: ELEC 430, 432, 434, 436, and 438 are usually offered in the French language		
<b>D. Control Systems and Avionics</b>		<i>Credits</i>
AERO 417	Standards, Regulations, and Certification	3.00
AERO 480	Flight Control Systems	3.50
AERO 482	Avionic Navigation Systems	3.00
AERO 483	Integration of Avionics Systems	3.00
ELEC 473	Autonomy for Mobile Robots	3.00
ELEC 481	Linear Systems	3.50
ELEC 482	System Optimization	3.50
ELEC 483	Real-Time Computer Control Systems	3.50
ENGR 472	Robot Manipulators	3.50
<b>E. Waves and Electromagnetics</b>		<i>Credits</i>
ELEC 453	Microwave Engineering	3.50
ELEC 455	Acoustics	3.00
ELEC 456	Antennas	3.50
ELEC 457	Design of Wireless RF Systems	3.00
ELEC 458	Techniques in Electromagnetic Compatibility	3.00

ELEC 424	VLSI Process Technology	3.50
ELEC 425	Optical Devices for High-Speed Communications	3.50
<b>C. Power</b>		<i>Credits</i>
ELEC 430	Electrical Power Equipment*	3.50
ELEC 431	Electrical Power Systems	3.50
ELEC 432	Control of Electrical Power Conversion Systems*	3.50
ELEC 433	Power Electronics	3.50
ELEC 434	Behaviour of Power Systems*	3.50
ELEC 435	Electromechanical Energy Conversion Systems	3.50
ELEC 436	Protection of Power Systems*	3.50
ELEC 437	Renewable Energy Systems	3.00
ELEC 438	Industrial Electrical Systems*	3.50
ELEC 439	Hybrid Electric Vehicle Power System Design and Control	3.00
ELEC 440	Controlled Electric Drives	3.50
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ELEC 482	System Optimization	3.50
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ELEC 455	Acoustics	3.00
ELEC 456	Antennas	3.50
ELEC 457	Design of Wireless RF Systems	3.00
ELEC 458	Techniques in Electromagnetic Compatibility	3.00

<b>F. Computer Systems</b>	<i>Credits</i>	<b>F. Computer Systems</b>	<i>Credits</i>			
COEN 313	Digital Systems Design II	3.50	COEN 313	Digital Systems Design II	3.50	
COEN 316	Computer Architecture and Design	3.50	COEN 316	Computer Architecture and Design	3.50	
COEN 317	Microprocessor Systems	3.50	COEN 317	Microprocessor Systems	3.50	
COEN 320	Introduction to Real-Time Systems	3.00	COEN 320	Introduction to Real-Time Systems	3.00	
COEN 345	Software Testing and Validation	3.50	COEN 345	Software Testing and Validation	3.50	
COEN 346	Operating Systems	3.50	COEN 346	Operating Systems	3.50	
COEN 352	Data Structures and Algorithms	3.00	COEN 352	Data Structures and Algorithms	3.00	
COEN 421	Embedded Systems Design	4.00	COEN 421	Embedded Systems Design	4.00	
COEN 422	Cyber-Physical Systems	3.00	COEN 422	Cyber-Physical Systems	3.00	
COEN 424	Programming on the Cloud	3.00	COEN 424	Programming on the Cloud	3.00	
SOEN 341	Software Process	3.00	SOEN 341	Software Process	3.00	
SOEN 342	Software Requirements and Specifications	3.00	SOEN 342	Software Requirements and Specifications	3.00	
SOEN 343	Software Architecture and Design I	3.00	SOEN 343	Software Architecture and Design I	3.00	
<b>G. Biological and Biomedical Engineering</b>	<i>Credits</i>	<b>G. Biological and Biomedical Engineering</b>	<i>Credits</i>			
COEN 432	Applied Evolutionary and Learning Algorithms	3.00	COEN 432	Applied Evolutionary and Learning Algorithms	3.00	
COEN 433	Biological Computing and Synthetic Biology	3.00	COEN 433	Biological Computing and Synthetic Biology	3.00	
COEN 434	Microfluidic Devices for Synthetic Biology	3.00	COEN 434	Microfluidic Devices for Synthetic Biology	3.00	
ELEC 444	Medical Image Processing	3.00	ELEC 444	Medical Image Processing	3.00	
<b>H. Other</b>	<i>Credits</i>	<b>H. Other</b>	<i>Credits</i>			
ELEC 498	Topics in Electrical Engineering	3.00	ELEC 498	Topics in Electrical Engineering	3.00	
ENGR 411	Special Technical Report	1.00	ENGR 411	Special Technical Report	1.00	
				<b>ELEC 445</b>	<a href="#"><u>Biological Signal Processing</u></a>	<a href="#"><u>3.00</u></a>

**Rationale:** ELEC 445 will be offered in the Biological and Biomedical Engineering electives. This change is aimed to expand the electives of the Electrical Engineering program.

**Resource Implications:** Students will use free software to process data and the course will be part of the faculty member's regular teaching load.

**DOSSIER TITLE: elec-102**

**DESCRIPTION OF CHANGE: BEng in Computer Engineering**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020

Implementation Month/Year: May 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program:** Computer Engineering

**Degree:** B.Eng.

**Section Title:** 71.30.2

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

- Editorial                       Requirements                       Regulations
- New Program                       Program Deletion

Present Text (Text from 2018– 2019 Calendar)	Proposed Text																																																														
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.																																																															
<p><b>71.30.2 Course Requirements (BEng in Computer Engineering)</b></p> <p>The program in Computer Engineering consists of the Engineering Core, the Computer Engineering Core, and one of four choices as set out below. The normal length of the program is 120 credits.</p> <p><b>Engineering Core:</b> (30.5 credits) See §71.20.5.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Computer Engineering Core</th> <th style="text-align: right;">Credits</th> </tr> </thead> <tbody> <tr><td>COEN 212 Digital Systems Design I</td><td style="text-align: right;">3.50</td></tr> <tr><td>COEN 231 Introduction to Discrete Mathematics</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 243 Programming Methodology I</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 244 Programming Methodology II</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 311 Computer Organization and Software</td><td style="text-align: right;">3.50</td></tr> <tr><td>COEN 313 Digital Systems Design II</td><td style="text-align: right;">3.50</td></tr> <tr><td>COEN 316 Computer Architecture and Design</td><td style="text-align: right;">3.50</td></tr> <tr><td>COEN 317 Microprocessor Systems</td><td style="text-align: right;">3.50</td></tr> <tr><td>COEN 346 Operating Systems</td><td style="text-align: right;">3.50</td></tr> <tr><td>COEN 352 Data Structures and Algorithms</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 390 Computer Engineering Product Design Project</td><td style="text-align: right;">3.00</td></tr> <tr><td>COEN 490 Capstone Computer Engineering Design Project</td><td style="text-align: right;">4.00</td></tr> <tr><td>ELEC 242 Continuous-Time Signals and Systems</td><td style="text-align: right;">3.00</td></tr> <tr><td>ELEC 311 Electronics I</td><td style="text-align: right;">3.50</td></tr> <tr><td>ELEC 321 Introduction to Semiconductor Materials and</td><td style="text-align: right;">3.50</td></tr> </tbody> </table>	Computer Engineering Core	Credits	COEN 212 Digital Systems Design I	3.50	COEN 231 Introduction to Discrete Mathematics	3.00	COEN 243 Programming Methodology I	3.00	COEN 244 Programming Methodology II	3.00	COEN 311 Computer Organization and Software	3.50	COEN 313 Digital Systems Design II	3.50	COEN 316 Computer Architecture and Design	3.50	COEN 317 Microprocessor Systems	3.50	COEN 346 Operating Systems	3.50	COEN 352 Data Structures and Algorithms	3.00	COEN 390 Computer Engineering Product Design Project	3.00	COEN 490 Capstone Computer Engineering Design Project	4.00	ELEC 242 Continuous-Time Signals and Systems	3.00	ELEC 311 Electronics I	3.50	ELEC 321 Introduction to Semiconductor Materials and	3.50	<p><b>71.30.2 Course Requirements (BEng in Computer Engineering)</b></p> <p>The program in Computer Engineering consists of the Engineering Core, the Computer Engineering Core, and one of four choices as set out below. 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ELEC 342	Discrete-Time Signals and Systems	3.50	ELEC 321	Introduction to Semiconductor Materials and Devices	3.50
ELEC 353	Transmission Lines, Waves and Signal Integrity	3.00	ELEC 342	Discrete-Time Signals and Systems	3.50
ELEC 372	Fundamentals of Control Systems	3.50	ELEC 353	Transmission Lines, Waves and Signal Integrity	3.00
ENGR 290	Introductory Engineering Team Design Project	3.00	ELEC 372	Fundamentals of Control Systems	3.50
SOEN 341	Software Process	3.00	ENGR 290	Introductory Engineering Team Design Project	3.00
		66.00	SOEN 341	Software Process	3.00
					66.00
<p><b><u>Students may choose one of the following options:</u></b></p> <p><u>I.</u> Avionics and Embedded Systems Option</p> <p><u>II.</u> Biological and Biomedical Engineering (BME) Option</p> <p><u>III.</u> Pervasive Computing Option</p> <p><u>Otherwise, students must follow IV.</u></p>			<p><b><u>Students may choose one of the following options:</u></b></p> <p><u>I.</u> Avionics and Embedded Systems Option</p> <p><u>II.</u> Biological and Biomedical Engineering (BME) Option</p> <p><u>III.</u> Pervasive Computing Option</p> <p><u>Otherwise, students must follow IV.</u></p>		
<p><b>I. Avionics and Embedded Systems Option Core</b></p>			<p><b>I. Avionics and Embedded Systems Option Core</b></p>		
AERO 480	Flight Control Systems	3.50	AERO 480	Flight Control Systems	3.50
AERO 482	Avionic Navigation Systems	3.00	AERO 482	Avionic Navigation Systems	3.00
AERO 483	Integration of Avionics Systems	3.00	AERO 483	Integration of Avionics Systems	3.00
COEN 320	Introduction to Real-Time Systems	3.00	COEN 320	Introduction to Real-Time Systems	3.00
COEN 421	Embedded Systems Design	4.00	COEN 421	Embedded Systems Design	4.00
	Minimum number of Elective credits must be chosen from the Computer Engineering Electives list	7.00		Minimum number of Elective credits must be chosen from the Computer Engineering Electives list	7.00
		23.50			23.50
<p><b>II. Biological and Biomedical Engineering (BME) Option Core</b></p>			<p><b>II. Biological and Biomedical Engineering (BME) Option Core</b></p>		
COEN 433	Biological Computing and Synthetic Biology	3.00	COEN 433	Biological Computing and Synthetic Biology	3.00
ELEC 444	Medical Image Processing	3.00	ELEC 444	Medical Image Processing	3.00
	Minimum number of Elective credits at least 9 of these 17.5 credits must be taken from the Biological and Biomedical Engineering Option Electives list. Not more than two science courses (BIOL or PHYS) may be taken. The remaining 8.5	17.50		Minimum number of Elective credits at least 9 of these 17.5 credits must be taken from the Biological and Biomedical Engineering Option Electives list. Not more than two science courses (BIOL or PHYS) may be taken. The remaining	17.50

<p>credits may be chosen from the Computer Engineering Electives list.</p> <p style="text-align: right;"><u>23.50</u></p> <p><b>Biological and Biomedical Engineering (BME) Option Electives</b> <i>Credits</i></p> <p>COEN 432 Applied Evolutionary and Learning Algorithms 3.00</p> <p>COEN 434 Microfluidic Devices for Synthetic Biology 3.00</p> <p>ELEC 442 Digital Signal Processing 3.50</p> <p>BIOL 261 Molecular and General Genetics 3.00</p> <p>BIOL 266 Cell Biology 3.00</p> <p>BIOL 367 Molecular Biology 3.00</p> <p>PHYS 260 Introductory Biophysics 3.00</p> <p>PHYS 443 Quantitative Human Systems Physiology 3.00</p> <p>PHYS 445 Principles of Medical Imaging 3.00</p> <p><b>III. Pervasive Computing Option Core</b> <i>Credits</i></p> <p>Coen 320 Introduction to Real -Time Systems 3.00</p> <p>Coen 421 Embedded Systems Design 4.00</p> <p>Coen 424 Programming on the Cloud 3.00</p> <p>Coen 445 Communication Networks and Protocols 3.50</p> <p>Minimum number of Elective credits: 10.00 10.00</p> <p>at least 3 of these 10 credits must be taken from the Pervasive Computing Option Electives list. The rest may be chosen from the Computer Engineering Electives list.</p> <p style="text-align: right;"><u>23.50</u></p> <p><b>Pervasive Computing Option Electives</b> <i>Credits</i></p> <p>COEN 422 Cyber- Physical Systems 3.00</p> <p>COEN 446 Internet of Things 3.00</p> <p>COEN 447 Software- Defined Networking 3.00</p> <p>ELEC 367 Introduction to Digital Communications 3.50</p> <p>ELEC 472 Advanced Telecommunication Networks 3.50</p> <p>SOEN 321 Information Systems Security 3.00</p>	<p>8.5 credits may be chosen from the Computer Engineering Electives list.</p> <p style="text-align: right;"><u>23.50</u></p> <p><b>Biological and Biomedical Engineering (BME) Option Electives</b> <i>Credits</i></p> <p>COEN 432 Applied Evolutionary and Learning Algorithms 3.00</p> <p>COEN 434 Microfluidic Devices for Synthetic Biology 3.00</p> <p>ELEC 442 Digital Signal Processing 3.50</p> <p><a href="#">ELEC 445 Biological Signal Processing</a> <a href="#">3.00</a></p> <p>BIOL 261 Molecular and General Genetics 3.00</p> <p>BIOL 266 Cell Biology 3.00</p> <p>BIOL 367 Molecular Biology 3.00</p> <p>PHYS 260 Introductory Biophysics 3.00</p> <p>PHYS 443 Quantitative Human Systems Physiology 3.00</p> <p>PHYS 445 Principles of Medical Imaging 3.00</p> <p><b>III. Pervasive Computing Option Core</b> <i>Credits</i></p> <p>Coen 320 Introduction to Real -Time Systems 3.00</p> <p>Coen 421 Embedded Systems Design 4.00</p> <p>Coen 424 Programming on the Cloud 3.00</p> <p>Coen 445 Communication Networks and Protocols 3.50</p> <p>Minimum number of Elective credits: 10.00 10.00</p> <p>at least 3 of these 10 credits must be taken from the Pervasive Computing Option Electives list. The rest may be chosen from the Computer Engineering Electives list.</p> <p style="text-align: right;"><u>23.50</u></p> <p><b>Pervasive Computing Option Electives</b> <i>Credits</i></p> <p>COEN 422 Cyber- Physical Systems 3.00</p> <p>COEN 446 Internet of Things 3.00</p> <p>COEN 447 Software- Defined Networking 3.00</p> <p>ELEC 367 Introduction to Digital Communications 3.50</p> <p>ELEC 472 Advanced Telecommunication Networks 3.50</p> <p>SOEN 321 Information Systems Security 3.00</p>
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<b>IV. For students NOT selecting an option: Credits</b>		<i>Credits</i>	<b>IV. For students NOT selecting an option: Credits</b>		<i>Credits</i>
<b>General Stream</b>			<b>General Stream</b>		
Coen 320	Introduction to Real -Time Systems	3.00	Coen 320	Introduction to Real -Time Systems	3.00
Coen 445	Communication Networks and Protocols	3.50	Coen 445	Communication Networks and Protocols	3.50
	Minimum number of Elective credits:	17.00		Minimum number of Elective credits:	17.00
	at least 3 of these 17 credits must be taken from the			at least 3 of these 17 credits must be taken from the	
	General Stream Electives list. The rest may be chosen			General Stream Electives list. The rest may be chosen	
	from the Computer Engineering Electives list.			from the Computer Engineering Electives list.	
		23.50			23.50
<b>General Stream Electives</b>		<i>Credits</i>	<b>General Stream Electives</b>		<i>Credits</i>
COEN 320	Introduction to Real-Time Systems	3.00	COEN 320	Introduction to Real-Time Systems	3.00
COEN 413	Hardware Functional Verification	3.00	COEN 413	Hardware Functional Verification	3.00
SOEN 321	Information Systems Security	3.00	SOEN 321	Information Systems Security	3.00
<b>Computer Engineering Electives</b>			<b>Computer Engineering Electives</b>		
Courses are listed in groups to facilitate course selection. With adequate academic justification and with permission of the Department, students may take one technical elective course from the Electrical Engineering Electives list.			Courses are listed in groups to facilitate course selection. With adequate academic justification and with permission of the Department, students may take one technical elective course from the Electrical Engineering Electives list.		
<b>A. Hardware/Electronics/VLSI</b>		<i>Credits</i>	<b>A. Hardware/Electronics/VLSI</b>		<i>Credits</i>
COEN 315	Digital Electronics	3.50	COEN 315	Digital Electronics	3.50
COEN 413	Hardware Functional Verification	3.00	COEN 413	Hardware Functional Verification	3.00
COEN 451	VLSI Circuit Design	4.00	COEN 451	VLSI Circuit Design	4.00
ELEC 312	Electronics II	3.50	ELEC 312	Electronics II	3.50
ELEC 413	Mixed-Signal VLSI for Communication Systems	4.00	ELEC 413	Mixed-Signal VLSI for Communication Systems	4.00
ELEC 423	Introduction to Analog VLSI	4.00	ELEC 423	Introduction to Analog VLSI	4.00
ELEC 458	Techniques in Electromagnetic Compatibility	3.00	ELEC 458	Techniques in Electromagnetic Compatibility	3.00
<b>B. Real-Time and Software Systems</b>		<i>Credits</i>	<b>B. Real-Time and Software Systems</b>		<i>Credits</i>
COEN 320	Introduction to Real-Time Systems	3.00	COEN 320	Introduction to Real-Time Systems	3.00
COEN 345	Software Testing and Validation	3.50	COEN 345	Software Testing and Validation	3.50
COEN 421	Embedded Systems Design	4.00	COEN 421	Embedded Systems Design	4.00
COEN 422	Cyber-Physical Systems	3.00	COEN 422	Cyber-Physical Systems	3.00
COEN 424	Programming on the Cloud	3.00	COEN 424	Programming on the Cloud	3.00

COEN 424	Programming on the Cloud	3.00	COEN 432	Applied Evolutionary and Learning Algorithms	3.00
COEN 432	Applied Evolutionary and Learning Algorithms	3.00			
<b>C. Biological and Biomedical Engineering</b>		<i>Credits</i>	<b>C. Biological and Biomedical Engineering</b>		<i>Credits</i>
COEN 432	Applied Evolutionary and Learning Algorithms	3.00	COEN 432	Applied Evolutionary and Learning Algorithms	3.00
COEN 433	Biological Computing and Synthetic Biology	3.00	COEN 433	Biological Computing and Synthetic Biology	3.00
COEN 434	Microfluidic Devices for Synthetic Biology	3.00	COEN 434	Microfluidic Devices for Synthetic Biology	3.00
ELEC 444	Medical Image Processing	3.00	ELEC 444	Medical Image Processing	3.00
			<a href="#">ELEC 445</a>	<a href="#">Biological Signal Processing</a>	<a href="#">3.00</a>
<b>D. Computer Science and Software Engineering</b>		<i>Credits</i>	<b>D. Computer Science and Software Engineering</b>		<i>Credits</i>
COMP 335	Introduction to Theoretical Computer Science	3.00	COMP 335	Introduction to Theoretical Computer Science	3.00
COMP 353	Databases	4.00	COMP 353	Databases	4.00
COMP 371	Computer Graphics	4.00	COMP 371	Computer Graphics	4.00
COMP 426	Multicore Programming	4.00	COMP 426	Multicore Programming	4.00
COMP 428	Parallel Programming	4.00	COMP 428	Parallel Programming	4.00
COMP 442	Compiler Design	4.00	COMP 442	Compiler Design	4.00
COMP 451	Database Design	4.00	COMP 451	Database Design	4.00
COMP 465	Design and Analysis of Algorithms	3.00	COMP 465	Design and Analysis of Algorithms	3.00
COMP 472	Artificial Intelligence	4.00	COMP 472	Artificial Intelligence	4.00
COMP 474	Intelligent Systems	4.00	COMP 474	Intelligent Systems	4.00
SOEN 342	Software Requirements and Specifications	3.00	<a href="#">SOEN 321</a>	<a href="#">Information Systems Security</a>	<a href="#">3.00</a>
SOEN 343	Software Architecture and Design I	3.00	SOEN 342	Software Requirements and Specifications	3.00
SOEN 344	Software Architecture and Design II	3.00	SOEN 343	Software Architecture and Design I	3.00
SOEN 357	User Interface Design	3.00	SOEN 344	Software Architecture and Design II	3.00
SOEN 448	Management of Evolving Systems	3.00	SOEN 357	User Interface Design	3.00
			SOEN 448	Management of Evolving Systems	3.00
<b>E. Telecommunications, Networks and Signal Processing</b>		<i>Credits</i>	<b>E. Telecommunications, Networks and Signal Processing</b>		<i>Credits</i>
COEN 445	Communication Networks and Protocols	3.50	COEN 445	Communication Networks and Protocols	3.50
ELEC 367	Introduction to Digital Communications	3.50	<a href="#">COEN 446</a>	<a href="#">Internet of Things</a>	<a href="#">3.00</a>
ELEC 442	Digital Signal Processing	3.50	<a href="#">COEN 447</a>	<a href="#">Software-Defined Networking</a>	<a href="#">3.00</a>
ELEC 465	Networks Security and Management	3.50	ELEC 367	Introduction to Digital Communications	3.50
ELEC 470	Broadcast Signal Transmission	3.00	ELEC 442	Digital Signal Processing	3.50
ELEC 472	Advanced Telecommunication Networks	3.50	ELEC 465	Networks Security and Management	3.50
			ELEC 470	Broadcast Signal Transmission	3.00
			ELEC 472	Advanced Telecommunication Networks	3.50
<b>F. Control Systems</b>		<i>Credits</i>	<b>F. Control Systems</b>		<i>Credits</i>
ELEC 481	Linear Systems	3.50	ELEC 481	Linear Systems	3.50
ELEC 482	System Optimization	3.50	ELEC 482	System Optimization	3.50
ELEC 483	Real-Time Computer Control Systems	3.50			
ELEC 473	Autonomy for Mobile Robots	3.00			
ENGR 472	Robot Manipulators	3.50			

<b>G. Avionics</b>		<i>Credits</i>	ELEC 483 Real-Time Computer Control Systems	3.50
AERO 417 Standards, Regulations and Certification		3.00	ELEC 473 Autonomy for Mobile Robots	3.00
AERO 480 Flight Control Systems		3.50	ENGR 472 Robot Manipulators	3.50
AERO 482 Avionic Navigation Systems		3.00	<b>G. Avionics</b>	<i>Credits</i>
AERO 483 Integration of Avionics Systems		3.00	AERO 417 Standards, Regulations and Certification	3.00
<b>H. Other</b>		<i>Credits</i>	AERO 480 Flight Control Systems	3.50
COEN 498 Topics in Computer Engineering		3.00	AERO 482 Avionic Navigation Systems	3.00
ENGR 411 Special Technical Report		1.00	AERO 483 Integration of Avionics Systems	3.00
			<b>H. Other</b>	<i>Credits</i>
			COEN 498 Topics in Computer Engineering	3.00
			ENGR 411 Special Technical Report	1.00

**Rationale:** The courses SOEN 321, COEN 446 and 447 were not part of the General elective for the Computer Engineering program. SOEN 321 will be offered in the list of Computer Science and Software Engineering electives and COEN 446 and 447 will be offered in the list of Telecommunications, Networks and Signal Processing electives. ELEC 445 will be offered in the list of Biological and Biomedical Engineering electives and in the Biological & Biomedical Engineering (BME) Option Electives. These changes are aimed to expand the Computer Engineering Electives.

**Resource Implications:** Students will use free software to process data in ELEC 445 and the course will be part of the faculty member's regular teaching load.

**DOSSIER TITLE – elec-102**

**COURSE NUMBER: COEN 244**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020

**Implementation Month/Year:** May 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program:** Electrical and Computer Engineering

**Degree:** B.Eng.

**Section Title:** 71.60

**Type of Change:** (please fill in all the appropriate boxes with an “X”) A separate form is required for each change.

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<b>COEN 244    <i>Programming Methodology II (3 credits)</i></b> Prerequisite: COEN 243. Review of object-oriented programming and further concepts. More on classes. Revisiting pointers. Operator overloading: regular and advanced usage. Fundamentals of file and stream processing. Class composition and inheritance: regular and advanced usage. Virtual functions. Polymorphism. Static and dynamic binding. Abstract classes. Case study of a small-scale object-oriented project: simplified analysis, design, and implementation. Introduction to templates, the standard template library, and exception handling. Introduction to dynamic data types. Namespaces. Lectures: three hours per week. Tutorial: two hours per week.	<b>COEN 244    <i>Programming Methodology II (3 credits)</i></b> Prerequisite: COEN 243 <u>or MECH 215</u> . Review of object-oriented programming and further concepts. More on classes. Revisiting pointers. Operator overloading: regular and advanced usage. Fundamentals of file and stream processing. Class composition and inheritance: regular and advanced usage. Virtual functions. Polymorphism. Static and dynamic binding. Abstract classes. Case study of a small-scale object-oriented project: simplified analysis, design, and implementation. Introduction to templates, the standard template library, and exception handling. Introduction to dynamic data types. Namespaces. Lectures: three hours per week. Tutorial: two hours per week.
<b>Rationale:</b> Aerospace engineering students from options A or B that want to change to option C have taken MECH 215 instead of COEN 243, which is an equivalent course. In option C the students must take COEN 244 so the prerequisite of MECH 215 must be added.	
<b>Resource Implications:</b> None	
<b>Other Programs within which course is listed:</b> Aerospace Engineering	

**DOSSIER TITLE: elec-102**  
**COURSE NUMBER COEN 434**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** May 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program** Electrical and Computer Engineering

**Degree:** B.Eng

**Section Title:** 71.60

**Type of Change:** (please fill in all the appropriate boxes with an “X”) A separate form is required for each change.

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>COEN 434 <i>Microfluidics Devices for Synthetic Biology</i></b> (3 credits)            Prerequisite: <del>ELEC 273 or ELEC 275</del> and ENGR 290. This course introduces microfluidics for synthetic biology. Introduction to microfluidic components (pumps, valves, automation), programming microfluidics, fabrication techniques, microfluidic paradigms, and applications for chemical and biological analysis. Introduction to synthetic biology; Biological Parts and their properties, network structure and pathway engineering, synthetic networks, manipulating DNA and measuring responses, basic behavior of genetic circuits, building complex genetic networks; integration of microfluidics and synthetic biology; economic implications. Lectures: three hours per week.</p>	<p><b>COEN 434 <i>Microfluidics Devices for Synthetic Biology</i></b> (3 credits)            Prerequisite: <u>COEN 244</u> and ENGR 290; <u>or BIOL 261 and COMP 249</u>. This course introduces microfluidics for synthetic biology. Introduction to microfluidic components (pumps, valves, automation), programming microfluidics, fabrication techniques, microfluidic paradigms, and applications for chemical and biological analysis. Introduction to synthetic biology; Biological Parts and their properties, network structure and pathway engineering, synthetic networks, manipulating DNA and measuring responses, basic behavior of genetic circuits, building complex genetic networks; integration of microfluidics and synthetic biology; economic implications. Lectures: three hours per week.</p>
<p><b>Rationale:</b> The removal of ELEC 273 (Basic Circuit Analysis) and ELEC 275 (Principles of Electrical Engineering) as prerequisites is due to the introduction of basic circuit concepts at the beginning of the course. Basic biology concepts is necessary for this course and is also introduced early on in the lectures. COEN 244 (Programming Methodology II) or COMP 249 (Object-Oriented Programming II) is required since the way it is operated - microfluidics, is via automation. Students will need a programming background to automate their own microfluidic devices. Also, the course has a final team project that involves students from both Engineering and Biology backgrounds, it is very beneficial to have students who have had some experience in project work (ENGR 290) and others who have a basic background in molecular biology (BIOL 261), within each project team.</p>	
<p><b>Resource Implications:</b> None</p>	
<p><b>Other Programs within which course is listed:</b> None</p>	

**DOSSIER TITLE: elec-102**  
**COURSE NUMBER: ELEC 445**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020  
**Implementation Month/Year:** May 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program:** Electrical and Computer Engineering

**Degree:** B.Eng.

**Section Title:** 71.60

**Type of Change:** (please fill in all the appropriate boxes with an “X”) A separate form is required for each change.

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 20XX – 20XX Calendar)	Proposed Text
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>ELEC 445 Biological Signal Processing</b> (3 credits)            Prerequisite: ELEC 442. This course covers signal processing through discussion of current bioengineering activities which rely on signal processing and include assessment of neural function with simultaneous collection of electroencephalogram (EEG) and functional MRI data; the non-invasive assessment of cardiac autonomic regulation using electrocardiography; assessment of neural function using near-infrared spectroscopy (NIRS); assessment of muscle activity using electromyography (EMG). Topics include modern spectral analysis, time-frequency analysis (short-time Fourier transforms and wavelets); signal modelling; multivariate analyses and adaptive filtering. Lectures: three hours per week.  <i>Note: Students who have received credit for this topic under ELEC 498 may not take this course for credit.</i></p>
<p><b>Rationale:</b> Our students learn about techniques from classical frequency analysis and filtering, but don't receive a comprehensive view of the use of these techniques in medical imaging applications. The proposed course focuses on anatomic-functional brain imaging. The proposed course briefly reviews the classical multivariate analysis and filtering topics covered in ELEC 442. It overlaps with the topic of least-mean square filters and is included because of its importance in the applied brain imaging topics discussed and its sequential relationship with other presented topics, e.g. regression analysis. The course content has been developed in collaboration with the Perform Centre. Our students learn about image acquisition techniques, image processing and image interpretation. This course is cross-listed with the graduate course and has been offered in Winter 2017 with 12 undergraduate and 19 graduate students, also in Winter 2018 with 19 undergraduate and 10 graduate students registered. This course will be part of the Electrical Engineering Elective list under G. Biological and Biomedical Engineering and part of the Computer Engineering elective list under C. Biological &amp; Biomedical Engineering. This course also will be part of the Biological and Biomedical Engineering (BME) Option Electives. This course is going to be cross-listed with ELEC 6671. There are different expectations of undergraduate and graduate students with respect to the term project and exams which are listed explicitly in the course outline attached.</p>	

**Resource Implications:** Students will use free software to process data and the course will be part of the faculty member's regular teaching load.

**Other Programs within which course is listed:** None

**Biological Signal Processing**  
**Department of Electrical and Computer Engineering**  
**Concordia University**  
**ELEC 445/6671**

<b>Instructor</b>	Habib Benali, Ph.D.
<b>Lab demonstrator</b>	Alireza Esmailzahi , Ph.D.
<b>Course Description</b>	<p>The investigation of the neuronal environment allows us to better understand the activity of a cerebral region as a whole. This course presents biological modeling and signal processing concepts through assessment of brain function with simultaneous collection of electroencephalogram (EEG), functional MRI data, optical imaging and Ultrason. Topics include signal modeling, multivariate analyses and computational model at the mesoscopic scale embedding the recent knowledge on the physiology as demonstrated on real-world biological signals. Coursework involves lectures, homework, exams and a term project.</p>
<b>Text</b>	<p><b>Statistical Parametric Mapping: The Analysis of Functional Brain Images</b>  <a href="#">William D. Penny</a>, <a href="#">Karl J. Friston</a>          ISBN-13: 978-0123725608</p> <p><b>Biosignal and Medical Image Processing</b>          John L. Semmlow, CRC Press, Third Edition          ISBN-13: 978-1466567368  <a href="https://www.crcpress.com/product/isbn/9781466567368">https://www.crcpress.com/product/isbn/9781466567368</a></p> <p>Additional optional readings from the scientific literature will be provided.</p>
<b>Assignments and Scoring</b>	<p><b>HOMEWORK</b>          Problem sets from the textbooks. Use of free software (Statistical Parametric Mapping software (SPM) and Fresurfer)</p> <p><b>TERM PROJECT</b>  <b>Undergraduate students:</b> Project will be completed with a <u>partner</u>. Students will write a paper reviewing a specific signal processing method applied to current brain activity challenges. Signal processing method may be one discussed in class or a novel method.</p> <p><b>Graduate students:</b> Project completed <u>individually</u> and <u>presented</u> to the class at the end of the term. Paper <u>reviewing</u> and <u>implementing</u> specific signal processing method to current brain activity challenge. This project requires use of real-world datasets or simulations, along with the development and implementation of methods. Paper will discuss background, methods and results.</p> <p><b>EXAMS</b>  <b>Undergraduate Students</b></p>

	<p>Exams will be problem solving questions similar to homework problems. Exams will be closed book; however, one page of notes is permitted.</p> <p><b>Graduate Students</b> Exams have situational type questions. A real world situation taken from the literature is given, and students are required to describe appropriate methods learned in class that will address the problem or research question. Exams will be closed book; however, one page of notes is permitted.</p>
<b>Prerequisite</b>	<p><b>Undergraduate students:</b> ELEC 442 Digital signal processing <b>Graduate students:</b> ELEC 6601 Digital signal processing</p>

<b>GRADING</b>		
<b>Item</b>	<b>Undergraduate (3 credits)</b>	<b>Graduate (4 credits)</b>
Weekly homework	10	10
Midterm Exam	30	30
Final Exam	30	30
Term Project	30	30

<b>LEARNING OUTCOMES</b>
<ol style="list-style-type: none"> <li><b>Current research using digital signal processing:</b> Learn how digital signal processing methods are applied and used to produce brain physiologically relevant measures in current research projects.</li> <li><b>Understand modern digital signal processing methods:</b> To learn advanced signal processing tools and their applications in human brain.</li> <li><b>Implementation of Signal Processing Methods:</b> Through homework assignments, and the term project for graduate students, the theory learned in class will be implemented providing students with a hands-on learning experience.</li> </ol>

<b>COURSE POLICIES</b>
<ul style="list-style-type: none"> <li>● Homework is due at the start of the class following that in which is was assigned.</li> <li>● Late homework will be marked 50% off.</li> <li>● Homework handed in greater than one week late will not be graded.</li> <li>● Homework is the opportunity for each student to learn the techniques discussed and is expected to be done individually.</li> <li>● Helping each other understand the homework is fine but the aim is for ALL students to leave the course with an understanding of the topics and how to apply them. Submitting work that is not your own does not accomplish this goal.</li> </ul>

<b>OUTLINE</b>	
<b>Week</b>	<b>Topic</b>
1	<u>Introduction to course.</u> Introduction to neural activity in the brain
2	<u>Introduction to course.</u> Introduction to the cerebral blood flow
3	<u>Challenge Topic 1.</u> Assessment of neural function with functional MRI (fMRI) and electroencephalogram (EEG) data
4	<u>Challenge Topic 2.</u> Assessment of neural function with Optical imaging (IOD)
5	<u>Challenge Topic 3.</u> Assessment of neural function using Ultrason (US) data
6	Setting up 1 day experiment at PERFORM Centre (MRI, EEG, US suits)
7	Midterm
8	<u>Signal Modeling.</u> General linear modeling, least squares regression
9	<u>Multivariate analyses.</u> Principal component analyses
10	<u>Multivariate analyses.</u> Partial Least Square analyses
11	<u>Multivariate analyses.</u> Independent component analyses
12	<u>Introduction to computational modeling.</u> Nonlinear systems
13	Presentation of graduate student projects and review for final

**OVERLAP WITH EXISTING COURSES**

<b>ELEC 442 - Digital Signal Processing</b>	
Overlap	<p>The proposed course briefly (part of lecture 1) reviews the classical frequency analysis and filtering topics covered in ELEC 442. The proposed course overlaps with the topic of least-mean square filters and is included because of its importance in the applied topics discussed and its sequential relationship with other presented topics, e.g. time-frequency analysis and regression. The proposed course also focuses on appropriate applications of these topics and their strengths and limitations in relation to the other topics discussed in class, for example modern spectral analyses.</p> <p>The textbook used in the proposed course is also very applications based whereas the Oppenheim textbook used for this course is more theoretical.</p>

<b>ELEC 6601 - Digital Signal Processing</b>
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Habib Benali

Overlap	The proposed course also focuses on appropriate applications of these topics and their strengths and limitations in relation to the other topics discussed in class, for example modern spectral analyses covered in ELEC 6601. The textbooks used in the proposed course are also very applications based.
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<b>COMP 6771 - Image Processing</b>	
Overlap	None

<b>COMP 7781 - Advanced Image Processing</b>	
Overlap	None

**FACULTY OF ENGINEERING  
AND COMPUTER SCIENCE**

**INTERNAL MEMORANDUM**

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**TO:** Dr. Sandra Gabriele, Vice- Provost, Innovation in Teaching and Learning

**FROM:** Dr. A. Asif, Dean; Chair, ENCS Faculty Council

**DATE:** April 27, 2018

**RE:** Changes to the undergraduate programs in the MIAE Department

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Please find attached a curriculum package for the undergraduate program in the Department of Mechanical, Industrial and Aerospace Engineering. The Department proposes the following changes.

1. Add the following courses under the list of electives in Mechanical Engineering program:
  - AERO 417 Standards, Regulations and Certification (3 credits)
  - AERO 455 Computational Fluid Dynamics for Aerospace Applications (3.75 credits)
  
2. Remove the tutorial from the following courses:
  - AERO 482 Avionic Navigation Systems (3 credits)
  - MECH 423 Casting, Welding, Heat Treating, and Non-Destructive Testing (3.5 credits)

This proposal passed the ENCS Undergraduate Studies Committee on March 28, 2018 as well as the Faculty Council on April 13, 2018. I would be grateful if you could put it on the agenda of the next APC meeting.

**INTERNAL MEMORANDUM**

**TO:** Ali Akgunduz, Associate Dean, Academic Programs,  
Faculty of Engineering and Computer Science

**FROM:** Martin D Pugh, Chair, MIAE

**DATE:** Tuesday March 20, 2018

**SUBJECT:** Curriculum changes in the MECH and AERO Undergraduate Programs

Please find attached the curriculum package for the undergraduate programs in the Mechanical, Industrial & Aerospace Engineering (MIAE) Department. The present package contains a number of program and course changes. These curriculum changes were reviewed and approved during the MIAE Department Council held on March 2, 2018.

**Overview of Changes**

The changes to our Undergraduate Programs in this package are summarized below.

**B. Mech Eng:** Add AERO 417 and AERO 455 to the list of Mechanical Engineering Electives

**B. Mech and Aero Eng:** Remove the tutorials from AERO 482 and MECH 423

**Resource Implications**

There are no resource implications resulting from the proposed changes.

We would be grateful if you could put this on the agenda of the next ENCS Undergraduate Studies Committee meeting.



MECH 368	Electronics for Mechanical Engineers	3.50
MECH 370	Modelling and Analysis of Dynamic Systems	3.50
MECH 371	Analysis and Design of Control Systems	3.75
MECH 375	Mechanical Vibrations	3.50
MECH 390	Mechanical Engineering Design Project	3.00
MECH 490	Capstone Mechanical Engineering Design Project	4.00

77.25

**Electives**

Students in the Mechanical Engineering program must complete at least 15.25 elective credits from the list of courses below.

Courses are listed in groups to facilitate the selection of courses in a particular area of the field.

**A- Aerospace**

Credits

AERO 462	Turbomachinery and Propulsion	3.00
AERO 464	Aerodynamics	3.00
AERO 465	Gas Turbine Design	3.50
AERO 480	Flight Control Systems	3.50
AERO 482	Avionic Navigation Systems	3.00
AERO 485	Introduction to Space Systems	3.00
AERO 486	Aircraft Stress Analysis	3.00
AERO 487	Design of Aircraft Structures	3.00
ENGR 411	Special Technical Report	1.00
ENGR 412	Honours Research Project	3.00
MECH 498	Topics in Mechanical Engineering	3.00

**B- Design and Manufacturing**

Credits

ENGR 411	Special Technical Report	1.00
ENGR 412	Honours Research Project	3.00
INDU 372	Quality Control and Reliability	3.00
INDU 411	Computer Integrated Manufacturing	3.50
INDU 440	Product Design and Development	3.00
MECH 412	Computer-Aided Mechanical Design	3.50
MECH 414	Computer Numerically Controlled Machining	3.50
MECH 421	Mechanical Shaping of Metals and Plastics	3.50
MECH 422	Mechanical Behaviour of Polymer Composite Materials	3.00
MECH 423	Casting, Welding, Heat Treating, and Non-Destructive Testing	3.50
MECH 424	MEMS – Design and Fabrication	3.50
MECH 425	Manufacturing of Composites	3.50
MECH 462	Wind Turbine Engineering	3.00
MECH 476	Generative Design and Manufacturing in Engineering	3.00
MECH 498	Topics in Mechanical Engineering	3.00

MECH 368	Electronics for Mechanical Engineers	3.50
MECH 370	Modelling and Analysis of Dynamic Systems	3.50
MECH 371	Analysis and Design of Control Systems	3.75
MECH 375	Mechanical Vibrations	3.50
MECH 390	Mechanical Engineering Design Project	3.00
MECH 490	Capstone Mechanical Engineering Design Project	4.00

77.25

**Electives**

Students in the Mechanical Engineering program must complete at least 15.25 elective credits from the list of courses below.

Courses are listed in groups to facilitate the selection of courses in a particular area of the field.

**Aerospace**

Credits

<a href="#">AERO 417</a>	<a href="#">Standards, Regulations and Certification</a>	<a href="#">3.00</a>
<a href="#">AERO 455</a>	<a href="#">Computational Fluid Dynamics for Aerospace Applications</a>	<a href="#">3.75</a>
AERO 462	Turbomachinery and Propulsion	3.00
AERO 464	Aerodynamics	3.00
AERO 465	Gas Turbine Design	3.50
AERO 480	Flight Control Systems	3.50
AERO 482	Avionic Navigation Systems	3.00
AERO 485	Introduction to Space Systems	3.00
AERO 486	Aircraft Stress Analysis	3.00
AERO 487	Design of Aircraft Structures	3.00
ENGR 411	Special Technical Report	1.00
ENGR 412	Honours Research Project	3.00
MECH 498	Topics in Mechanical Engineering	3.00

**Design and Manufacturing**

Credits

ENGR 411	Special Technical Report	1.00
ENGR 412	Honours Research Project	3.00
INDU 372	Quality Control and Reliability	3.00
INDU 411	Computer Integrated Manufacturing	3.50
INDU 440	Product Design and Development	3.00
MECH 412	Computer-Aided Mechanical Design	3.50
MECH 414	Computer Numerically Controlled Machining	3.50
MECH 421	Mechanical Shaping of Metals and Plastics	3.50
MECH 422	Mechanical Behaviour of Polymer Composite Materials	3.00
MECH 423	Casting, Welding, Heat Treating, and Non-Destructive Testing	3.50
MECH 424	MEMS – Design and Fabrication	3.50
MECH 425	Manufacturing of Composites	3.50
MECH 462	Wind Turbine Engineering	3.00
MECH 476	Generative Design and Manufacturing in Engineering	3.00
MECH 498	Topics in Mechanical Engineering	3.00

<b>Ⓔ Systems and Mechatronics</b>	<i>Credits</i>	<b>Systems and Mechatronics</b>	<i>Credits</i>		
AERO 480	Flight Control Systems	3.50	AERO 480	Flight Control Systems	3.50
AERO 482	Avionic Navigation Systems	3.00	AERO 482	Avionic Navigation Systems	3.00
ENGR 411	Special Technical Report	1.00	ENGR 411	Special Technical Report	1.00
ENGR 412	Honours Research Project	3.00	ENGR 412	Honours Research Project	3.00
MECH 411	Instrumentation and Measurements	3.50	MECH 411	Instrumentation and Measurements	3.50
MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00	MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00
MECH 463	Fluid Power Control	3.50	MECH 463	Fluid Power Control	3.50
MECH 471	Microcontrollers for Mechatronics	3.50	MECH 471	Microcontrollers for Mechatronics	3.50
MECH 472	Mechatronics and Automation	3.50	MECH 472	Mechatronics and Automation	3.50
MECH 473	Control System Design	3.50	MECH 473	Control System Design	3.50
MECH 474	Mechatronics	3.75	MECH 474	Mechatronics	3.75
MECH 498	Topics in Mechanical Engineering	3.00	MECH 498	Topics in Mechanical Engineering	3.00
<b>Ⓕ Thermo-Fluids and Propulsion</b>	<i>Credits</i>	<b>Thermo-Fluids and Propulsion</b>	<i>Credits</i>		
AERO 462	Turbomachinery and Propulsion	3.00	<a href="#">AERO 455</a>	<a href="#">Computational Fluid Dynamics for Aerospace Applications</a>	<a href="#">3.75</a>
AERO 465	Gas Turbine Design	3.50	AERO 462	Turbomachinery and Propulsion	3.00
ENGR 411	Special Technical Report	1.00	AERO 465	Gas Turbine Design	3.50
ENGR 412	Honours Research Project	3.00	ENGR 411	Special Technical Report	1.00
MECH 411	Instrumentation and Measurements	3.50	ENGR 412	Honours Research Project	3.00
MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00	MECH 411	Instrumentation and Measurements	3.50
MECH 452	Heat Transfer II	3.50	MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00
MECH 453	Heating, Ventilation and Air Conditioning Systems	3.00	MECH 452	Heat Transfer II	3.50
MECH 461	Gas Dynamics	3.50	MECH 453	Heating, Ventilation and Air Conditioning Systems	3.00
MECH 462	Wind Turbine Engineering	3.00	MECH 461	Gas Dynamics	3.50
MECH 463	Fluid Power Control	3.50	MECH 462	Wind Turbine Engineering	3.00
MECH 498	Topics in Mechanical Engineering	3.00	MECH 463	Fluid Power Control	3.50
			MECH 498	Topics in Mechanical Engineering	3.00
<b>Ⓖ Vehicle Systems</b>	<i>Credits</i>	<b>Vehicle Systems</b>	<i>Credits</i>		
ENGR 411	Special Technical Report	1.00	ENGR 411	Special Technical Report	1.00
ENGR 412	Honours Research Project	3.00	ENGR 412	Honours Research Project	3.00
MECH 411	Instrumentation and Measurements	3.50	MECH 411	Instrumentation and Measurements	3.50
MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00	MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00
MECH 444	Guided Vehicle Systems	3.00	MECH 444	Guided Vehicle Systems	3.00
MECH 447	Fundamentals of Vehicle System Design	3.50	MECH 447	Fundamentals of Vehicle System Design	3.50
MECH 448	Vehicle Dynamics	3.00	MECH 448	Vehicle Dynamics	3.00
MECH 454	Vehicular Internal Combustion Engines	3.00	MECH 454	Vehicular Internal Combustion Engines	3.00
MECH 473	Control System Design	3.50	MECH 473	Control System Design	3.50
MECH 498	Topics in Mechanical Engineering	3.00	MECH 498	Topics in Mechanical Engineering	3.00
<b>Ⓕ Stress Analysis</b>	<i>Credits</i>	<b>Stress Analysis</b>	<i>Credits</i>		
AERO 431	Principles of Aeroelasticity	3.00	AERO 431	Principles of Aeroelasticity	3.00
AERO 486	Aircraft Stress Analysis	3.00	AERO 486	Aircraft Stress Analysis	3.00
ENGR 411	Special Technical Report	1.00	ENGR 411	Special Technical Report	1.00

ENGR 412	Honours Research Project	3.00	ENGR 412	Honours Research Project	3.00
MECH 411	Instrumentation and Measurements	3.50	MECH 411	Instrumentation and Measurements	3.50
MECH 412	Computer-Aided Mechanical Design	3.50	MECH 412	Computer-Aided Mechanical Design	3.50
MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00	MECH 415	Advanced Programming for Mechanical and Industrial Engineers	3.00
MECH 422	Mechanical Behaviour of Polymer Composite Materials	3.00	MECH 422	Mechanical Behaviour of Polymer Composite Materials	3.00
MECH 426	Stress and Failure Analysis of Machinery	3.00	MECH 426	Stress and Failure Analysis of Machinery	3.00
MECH 460	Finite Element Analysis	3.75	MECH 460	Finite Element Analysis	3.75
MECH 498	Topics in Mechanical Engineering	3.00	MECH 498	Topics in Mechanical Engineering	3.00

**Rationale:** Both courses are not currently listed in the Mechanical technical electives, but these students are interested in taking them and currently have to fill in a Student Request Form for permission.

In addition, the department proposes to remove the letters from the electives because students misinterpret the courses that are listed in groups as options.

**Resource Implications:** None.

**DOSSIER TITLE:** mech-108  
**COURSE NUMBER AERO 482**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020  
 Implementation Month/Year: \_\_\_\_\_ May \_\_\_\_\_ 2019

**Faculty:** Engineering and Computer Science **Department:** Department of Mechanical, Industrial and Aerospace Engineering

**Program:** Aerospace Engineering **Degree:** BEng **Section Title:** 71.60

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>AERO 482 Avionic Navigation Systems</b> (3 credits)            Prerequisite: ENGR 371 or COMP 233; AERO 371 or ELEC 372 or MECH 370 or SOEN 385. Basics of modern electronic navigation systems, history of air navigation, earth coordinate and mapping systems; basic theory and analysis of modern electronic navigation instrumentation, communication and radar systems, approach aids, airborne systems, transmitters and antenna coverage; noise and losses, target detection, digital processing, display systems and technology; demonstration of avionic systems using flight simulator. Lectures: three hours per week. <del>Tutorial: one hour per week.</del>  <i>NOTE: Students who have received credit for ELEC 416 or MECH 482 may not take this course for credit.</i></p>	<p><b>AERO 482 Avionic Navigation Systems</b> (3 credits)            Prerequisite: ENGR 371 or COMP 233; AERO 371 or ELEC 372 or MECH 370 or SOEN 385. Basics of modern electronic navigation systems, history of air navigation, earth coordinate and mapping systems; basic theory and analysis of modern electronic navigation instrumentation, communication and radar systems, approach aids, airborne systems, transmitters and antenna coverage; noise and losses, target detection, digital processing, display systems and technology; demonstration of avionic systems using flight simulator. Lectures: three hours per week.  <i>NOTE: Students who have received credit for ELEC 416 or MECH 482 may not take this course for credit.</i></p>
<p><b>Rationale:</b> The tutorials have not been offered because they are not required for the course.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> BEng in Mechanical Engineering</p>	

**DOSSIER TITLE:** mech-108  
**COURSE NUMBER** MECH 423  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020  
 Implementation Month/Year: \_\_\_\_\_ May \_\_\_\_\_ 2019

**Faculty:** Engineering and Computer Science

**Department:** Department of Mechanical, Industrial and Aerospace Engineering

**Program:** Mechanical Engineering

**Degree:** BEng

**Section Title:** 71.60

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>MECH 423 Casting, Welding, Heat Treating, and Non -Destructive Testing</b> (3.5 credits)            Prerequisite: MECH 221. Comparative analysis of the various techniques of casting, welding, powder fabrication, finishing, and non-destructive testing. Consideration of the control parameters that are essential to define both automation and robot application. Materials behaviour which determines product micro-structure and properties. Technology and theory of solidification, normalizing, quenching, surface hardening, tempering, aging, and thermomechanical processing for steels, cast irons and Al, Cu, Ni and Ti alloys. Energy conservation, worker safety, quality control, and product liability. Lectures: three hours per week. <del>Tutorial: one hour per week.</del> Laboratory: two hours per week, alternate weeks.</p>	<p><b>MECH 423 Casting, Welding, Heat Treating, and Non -Destructive Testing</b> (3.5 credits)            Prerequisite: MECH 221. Comparative analysis of the various techniques of casting, welding, powder fabrication, finishing, and non-destructive testing. Consideration of the control parameters that are essential to define both automation and robot application. Materials behaviour which determines product micro-structure and properties. Technology and theory of solidification, normalizing, quenching, surface hardening, tempering, aging, and thermomechanical processing for steels, cast irons and Al, Cu, Ni and Ti alloys. Energy conservation, worker safety, quality control, and product liability. Lectures: three hours per week. Laboratory: two hours per week, alternate weeks.</p>
<p><b>Rationale:</b> The tutorials have been offered but the instructor found that they have no added value to the course.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> BEng in Aerospace Engineering</p>	

**FACULTY OF FINE ARTS**

## INTERNAL MEMORANDUM

**TO:** Dr. Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning; Chair, Academic Programs Committee

**FROM:** Dr. Rebecca Duclos, Dean, Faculty of Fine Arts

**CC:** Ms. Olivia Ward, University Curriculum Administrator, Office of the Provost  
Dr. Mark Sussman, Associate Dean, Academic Affairs, Faculty of Fine Arts

**DATE:** March 20, 2018

**RE:** Curriculum Dossier for the Department of Music, MUSI-17



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As Dean of the Faculty of Fine Arts, I fully support the curriculum changes proposed in MUSI-17. The dossier was reviewed and unanimously approved by the Fine Arts Faculty Council at its meeting on March 16, 2018.

There are no resource implications.

Rebecca Duclos  
Dean, Faculty of Fine Arts  
[Rebecca.Duclos@concordia.ca](mailto:Rebecca.Duclos@concordia.ca)  
848-2424 ext. 4602



## FACULTY OF FINE ARTS

### Internal Memorandum

**To:** Rebecca Duclos, Dean, Faculty of Fine Arts  
**From:** Mark Sussman, Associate Dean, Academic Affairs  
**Date:** March 9, 2018  
**Re:** Curriculum dossier, Department of Music, MUSI-17

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The Faculty of Fine Arts Curriculum Committee has reviewed and unanimously approved the MUSI-17 curriculum dossier from the Department of Music. We hereby submit this dossier for review at Faculty Council on March 16, 2018.

There are no resource implications.

With thanks for your consideration.

A handwritten signature in black ink, appearing to read "Mark Sussman".

Mark Sussman, PhD  
Associate Dean, Academic Affairs  
Faculty of Fine Arts  
[mark.sussman@concordia.ca](mailto:mark.sussman@concordia.ca)

To: Faculty Curriculum Committee, Fine Arts  
From: Mark Corwin, Chair, Department of Music  
Date: February 25, 2018  
Subject: **Curriculum Proposal MUSI-17**

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The curriculum proposal below was approved by the Department Curriculum Committee on October 16, 2017, and by the Departmental Council on October 23.

The Department of Music proposes a combination of major and minor curricular changes to its Undergraduate programs. A number of these changes are simple housekeeping such as corrections to prerequisites and revisions to course descriptions for clarification and updates to current practices. Additionally, the Department is dedicated to providing all of its graduates with robust skill sets in step with current pedagogical and technological practices, necessitating the renewal of some of its program requirements to fit the modern reality of the incredibly wide array of current musical career paths. All programs in Music are affected by these changes to some extent.

The following program changes affect the requirements for graduation of specific programs. A grid of these changes, per course, follows.

- The Specialization in Jazz Studies is requiring three additional credits of Jazz ensemble by also removing the required course JAZZ 251 *Rhythm and Melody* which has functionally not been given for a number of years; its curriculum being provided for in other core courses. The additional ensemble requirement represents a deepening commitment to live jazz performance skill development.
- The Major in Music and the Specialization in Music Composition are changing the specific required music history course from MHIS 331, *Aesthetics and Musical Styles*, to a wider selection of 300 and 400-level MHIS course options. This will provide more flexibility in the selection of Music history courses by students during their years of study.
- The Specialization in Music Composition is adding MUSI 311 *Aural Perception III* to its required courses as advanced techniques of listening and hearing are important elements in the successful training of a composer.
- The Major in Music proposes the reduction in the credit weight of the Capstone course, MUSI 401, to bring it in line with the other Capstone courses in the Department such as EAST 461, 462, 465, 466 and JAZZ 400. Although the course was piloted as a full-year course at 3 credits, it was errantly listed as a 6-credit course. For the last few years it has successfully been given instead as a 3-credit Special Topics course, MUSI 498. The change in credit value from 6 to 3 credits along with the corresponding change in the course number from MUSI 401 to MUSI 402 will correct this error.
- Creation of unique course codes for the two unique music choir courses, MPER 333 and 433 for the Chamber Choir I and II, and MPER 334 and 434 for the University Choir I and II.
- The addition of a note concerning the requirement to take an audition before being allowed to continue in the following music performance courses: MPER 201, 301 and 401, University Orchestra I, II and III; MPER 234 and 321, Chamber Ensemble I and II; MPER 233 and 333, University Choir I and II.

The following grid gives a consolidated view of the proposed changes.

Course	New Course	Course Deletion	Title	Prerequisite	Description	Addition/ Change to Note	Deletion of note	Course number	Credit Value
EAST 204		X							
EAST 361				X	X				
EAST 362				X	X				
EAST 363				X					
EAST 365				X					
EAST 398			X		X				
EAST 399			X		X				
EAST 461				X	X				
EAST 462				X					
EAST 463				X					
EAST 465				X					
EAST 466				X					
EAST 471				X	X				
EAST 481				X					
EAST 482				X					
EAST 498			X		X				
EAST 499			X		X				
MHIS 200		X							
MHIS 203					X	X	X		
MHIS 204					X	X	X		
MHIS 298				X					
MHIS 301		X							
MHIS 302		X							
MHIS 303		X							
MHIS 304		X							
MHIS 305				X					
MHIS 306	X								
MHIS 307	X								
MHIS 331				X					
MPER 201					X	X			
MPER 231		X							
MPER 233	X								
MPER 234	X								
MPER 251				X					
MPER 252				X		X			
MPER 301				X	X				
MPER 321						X			
MPER 331		X							
MPER 332		X							
MPER 333	X								

Course	New Course	Course Deletion	Title	Prerequisite	Description	Addition or Change to Note	Deletion of note	Course number	Credit Value
MPER 334	X								
MPER 351				X					
MPER 352				X		X			
MPER 401/402					X				
MPER 422		X							
MPER 431		X							
MPER 432		X							
MPER 433	X								
MPER 434	X								
MPER 451				X					
MPER 452				X		X			
MUSI 200/201						X		X	X
MUSI 211				X	X				
MUSI 212				X	X				
MUSI 241				X					
MUSI 263				X					
MUSI 298				X					
MUSI 312-412				X	X	X		X	
MUSI 321			X		X				
MUSI 353				X	X				
MUSI 364				X					
MUSI 365				X					
MUSI 398				X	X				
MUSI 401-402						X		X	X

## Details

### ***Program Changes***

#### 1) Additional ensemble requirement in the Specialization in Jazz Studies

The Specialization in Jazz Studies is removing the required course JAZZ 251 *Rhythm and Melody* to provide for the addition of three more credits of required jazz ensemble. It is their wish to place more emphasis on the primary focus of jazz, that of performance. With the reduction of the jazz ensemble credits a number of years ago, to come into line with the academic norms for this type of class, the area wishes to redirect credits into further developing the student's performance training with this additional 3-credit requirement. JAZZ 251 has not been given for two years now, the fundamental content of the course being distributed over other 200-level courses.

#### 2) Removal of MHIS 331 from the Major in Music and the Specialization in Music Composition

MHIS 331 *Aesthetics and Musical Styles* is currently a required course in the Major in Music and the Specialization in Music Composition. It is being replaced by a 'choice' provision of music history courses so that students may select from more options of 300-level MHIS courses to fulfill their history of Music requirement. The Department has not offered this course in many years, preferring to offer varied Special Topics history courses. In tandem with this change, the Department is proposing two new MHIS courses, MHIS 306 and 307, that will focus on the influences and impact on current creative musical practices within two specific genres, the Early music period and the Common Practice period.

#### 3) The addition of MUSI 311 to the Specialization in Music Composition

The Specialization in Music Composition is adding MUSI 311 *Aural Perception III* to its requirements. The training of the ear with respect to advanced techniques of listening and hearing is an important element in the successful training of a composer. Being able to 'hear' the music that is composed in one's mind provides composers of all genres of music with an invaluable aid to their creative practice. Although there are technological tools available to the composer that allows them to hear their creative work, the skill to hear it as well as the work of other composers, 'in the head', advances the perceptual capabilities of the student.

4) Reduction of credits for the Capstone course in the Major in Music.

MUSI 401 was originally piloted as a one year course but is better suited to a one-term format. All other capstone courses in the Department of Music (EAST and JAZZ) are 3-credit courses. As an interim measure, the Music Capstone was offered in 2017-18 as a Special Topics course, MUSI 498<sup>3</sup>. The solution is that MUSI 401 is being renumbered to MUSI 402 and the credit value is being reduced from six to three.

### ***General Housekeeping***

There are additional changes required to existing courses and programs to clarify course prerequisites, descriptions and requirements. None of these changes or additions has any resource implications. Course additions are to be offered only through cycling, i.e. new 300 and 400-level MHIS history courses will still only be offered one course at a time.

5) Revisions of some course descriptions are being proposed for clarification or to come into line with actual practice; EAST 205, 231, 251, 305, 361, 362, 398, 399, 461, 471, 498, 499; MHIS 203, 204; MPER 201, 301, 401; MUSI 211, 212, 321, 353 and 398.

6) The creation of unique course codes for the two choir courses, currently MPER 231 A and B, will more clearly identify the content of the two very different courses, University Choir with nearly 100 members and Chamber Choir reserved for experienced singers who are predominantly in the Specialization in Music Performance. This change will require the updating of all courses and programs where this course was listed. All programs in Music, with the exception of the Minor, Major and Specializations in Electroacoustics, require a choir course. This change also provides for greater clarity on student transcripts as to exactly what choir course a student has taken. It is generally understood that the Chamber Choir requires greater vocal skill than the University Choir, although many highly skilled vocalists take the University Choir.

7) A number of changes are being made to add clarification and standardization of the prerequisites and the place of courses in various programs. With the exception of those required due to the addition of the new Specializations in Electroacoustic Studies, these changes are found in EAST 361, 362, 363, 365, 461, 462, 463, 465, 466, 471, 481; MHIS 298, 305, 331; MPER 251, 252 and 301.

8) Deletion of obsolete course codes, MHIS 200, MPER 331, MPER 431, MHIS 301, 302, 303, 304. These courses have not been taught for many years. They have been replaced or been combined into other currently offered courses. Removing them provides current and prospective students with a correct view of the current course offerings by the Department of Music.

9) Certain ensemble courses require an in-person audition before the DNE deadline so as to assure their qualifications to enter the course. This affects MPER 201 and MPER 321, This note is also found in the replacement courses for the choir courses MPER 233, 234, 333, 334, 433 and 434.

**DOSSIER TITLE: MUSI-17**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM – (please fill in all the appropriate information)**

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020

Implementation Month/Year: September 2019

Faculty: Fine Arts

Department: MUSIC

Program: Specialization in Jazz Studies

Degree: BFA

Section Title: 81.100

Type of Change: (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

- Editorial
- Requirements
- Regulations
- New Program
- Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>66 BFA Specialization in Jazz Studies</b></p> <p>6 JAZZ 200<sup>6</sup> or, if exempt, Department of Music electives</p> <p>9 JAZZ 209<sup>3</sup>, 210<sup>3</sup>, 311<sup>3</sup></p> <p><del>12</del> JAZZ <del>254</del><sup>3</sup>, 252<sup>3</sup>, 351<sup>3</sup>, 352<sup>3</sup></p> <p><del>3</del> Chosen from JPER 223<sup>3</sup>, 224<sup>3</sup>, 225<sup>3</sup></p> <p>3 JPER 225<sup>3</sup> or <del>MPER 234</del><sup>3</sup></p> <p>6 JPER 251<sup>3</sup>, 252<sup>3</sup></p> <p>3 JAZZ 400<sup>3</sup></p> <p>6 JHIS 314<sup>3</sup>; 3 credits JHIS electives</p> <p>12 Chosen from JAZZ, JHIS, and JPER courses</p> <p>6 Department of Music electives, chosen in consultation with a Music advisor</p>	<p><b>66 BFA Specialization in Jazz Studies</b></p> <p>6 JAZZ 200<sup>6</sup> or, if exempt, Department of Music electives</p> <p>9 JAZZ 209<sup>3</sup>, 210<sup>3</sup>, 311<sup>3</sup></p> <p><u>9</u> JAZZ 252<sup>3</sup>, 351<sup>3</sup>, 352<sup>3</sup></p> <p><u>6</u> Chosen from JPER 223<sup>3</sup>, 224<sup>3</sup>, 225<sup>3</sup>, <u>323</u><sup>3</sup>, <u>324</u><sup>3</sup>, <u>325</u><sup>3</sup></p> <p>3 JPER 225<sup>3</sup> or <u>MPER 233</u><sup>3</sup> or <u>MPER 234</u><sup>3</sup></p> <p>6 JPER 251<sup>3</sup>, 252<sup>3</sup></p> <p>3 JAZZ 400<sup>3</sup></p> <p>6 JHIS 314<sup>3</sup>; 3 credits JHIS electives</p> <p>12 Chosen from JAZZ, JHIS, and JPER courses</p> <p>6 Department of Music electives, chosen in consultation with a Music advisor</p>
<p><b>Rationale:</b> JAZZ 251 (Jazz Rhythm and Melody) is being removed to make room for the addition of three more credits to the ensemble requirement; a reflection of the emphasis on ensemble playing. The course content of JAZZ 251 has been distributed over other 200-level courses for a number of years. The addition of second-level ensemble courses, JPER 323, 324 and 325, will allow students to focus on one ensemble for their 6-credit requirement as apposed to being forced to select a different ensemble. There are new course codes for each of the two unique choirs, MPER 233 (University Choir) and MPER 234 (Chamber Choir).</p> <p><b>Resource Implications:</b> None.</p>	

**DOSSIER TITLE: MUSI-17**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM – (please fill in all the appropriate information)**

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020  
Implementation Month/Year: September 2019

Faculty: Fine Arts

Department: MUSIC

Program: Specialization in Music Composition

Degree: BFA

Section Title: 81.100

Type of Change: (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

- Editorial
- Requirements
- Regulations
- New Program
- Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>66 BFA Specialization in Music Composition</b></p> <p><del>24</del> MUSI 211<sup>3</sup>, 212<sup>3</sup>, 251<sup>3</sup>, 252<sup>3</sup>, 351<sup>3</sup>, 352<sup>3</sup>, 353<sup>3</sup></p> <p>3 Chosen from JPER 225<sup>3</sup>; MPER 201<sup>3</sup>, 223<sup>3</sup>, <del>234<sup>3</sup></del></p> <p>6 MPER 251<sup>3</sup>, 252<sup>3</sup></p> <p>3 Chosen from MPER 361<sup>3</sup>; MUSI 322<sup>3</sup>, 421<sup>3</sup></p> <p>6 MHIS <del>200<sup>6</sup></del> or, if exempt, MHIS electives</p> <p>3 <del>MHIS 331<sup>3</sup></del></p> <p>12 MUSI 261<sup>3</sup>, 262<sup>3</sup>, 361<sup>3</sup>, 362<sup>3</sup></p> <p>6 Chosen from MUSI 263<sup>3</sup>, 363<sup>3</sup>, 364<sup>3</sup>, 365<sup>3</sup>, 461<sup>3</sup>, 462<sup>3</sup></p> <p><del>6</del> MUSI <del>401<sup>6</sup></del></p>	<p><b>66 BFA Specialization in Music Composition</b></p> <p><u>24</u> MUSI 211<sup>3</sup>, 212<sup>3</sup>, 251<sup>3</sup>, 252<sup>3</sup>, <u>311<sup>3</sup></u>, 351<sup>3</sup>, 352<sup>3</sup>, 353<sup>3</sup></p> <p>3 Chosen from JPER 225<sup>3</sup>; MPER 201<sup>3</sup>, 223<sup>3</sup>, <u>233<sup>3</sup></u>, <u>234<sup>3</sup></u></p> <p>6 MPER 251<sup>3</sup>, 252<sup>3</sup></p> <p>3 Chosen from MPER 361<sup>3</sup>; MUSI 322<sup>3</sup>, 421<sup>3</sup></p> <p>6 MHIS <u>203<sup>3</sup></u>, <u>204<sup>3</sup></u> or, if exempt, MHIS electives</p> <p>3 <u>Chosen from MHIS courses at the 300 and 400 level</u></p> <p>12 MUSI 261<sup>3</sup>, 262<sup>3</sup>, 361<sup>3</sup>, 362<sup>3</sup></p> <p>6 Chosen from MUSI 263<sup>3</sup>, 363<sup>3</sup>, 364<sup>3</sup>, 365<sup>3</sup>, 461<sup>3</sup>, 462<sup>3</sup></p> <p><u>3</u> MUSI <u>402<sup>3</sup></u></p>
<p><b>Rationale:</b> There are new course codes for each of the two unique choirs, MPER 233 (University Choir) and MPER 234 (Chamber Choir), providing students with clarity of selection. MHIS 200 is being replaced by two courses (MHIS 203, 204 are currently also listed as MHIS 200) to offer greater clarity in the contents as well as flexibility in course selection. MUSI 311 (Aural Perception III) is being added as it is required in the Specialization in Music Performance. MHIS 331 is being replaced by a "Choice" provision to give more selection at the 300 and 400-level MHIS electives. MUSI 401 (Capstone) is being reduced in credit and renumbered as MUSI 402 to conform to the other Capstone course structures in Music.</p>	
<p><b>Resource Implications:</b> None.</p>	

**DOSSIER TITLE: MUSI-17**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM – (please fill in all the appropriate information)**

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020

Implementation Month/Year: September 2019

Faculty: Fine Arts

Department: MUSIC

Program: Specialization in Music Performance

Degree: BFA

Section Title: 81.100

Type of Change: (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

- Editorial             Requirements             Regulations
- New Program         Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>66 BFA Specialization in Music Performance</b></p> <p>21 MUSI 211<sup>3</sup>, 212<sup>3</sup>, 251<sup>3</sup>, 252<sup>3</sup>, 311<sup>3</sup>, 351<sup>3</sup>, 352<sup>3</sup></p> <p>3 <del>MPER 234<sup>3</sup></del> or JPER 225<sup>3</sup></p> <p>6 MPER 251<sup>3</sup>, 252<sup>3</sup></p> <p>6 MPER 351<sup>3</sup> and 352<sup>3</sup> or MPER 390<sup>6</sup></p> <p>6 MPER 490<sup>6</sup></p> <p>6 MHIS <del>200<sup>6</sup></del> or, if exempt, MHIS electives</p> <p>6 MHIS electives, which may include MUSI 421<sup>3</sup></p> <p>12 Chosen from MPER 201<sup>3</sup>, 223<sup>3</sup>, 298<sup>3</sup>, 301<sup>3</sup>, 321<sup>3</sup>, 322<sup>3</sup>, 323<sup>3</sup>, <del>334<sup>3</sup></del>, 361<sup>3</sup>, 398<sup>3</sup>, <del>399<sup>6</sup></del>, 401<sup>3</sup>, 422<sup>3</sup>, 423<sup>3</sup>, <del>434<sup>3</sup></del>, 498<sup>3</sup>, <del>499<sup>6</sup></del></p>	<p><b>66 BFA Specialization in Music Performance</b></p> <p>21 MUSI 211<sup>3</sup>, 212<sup>3</sup>, 251<sup>3</sup>, 252<sup>3</sup>, 311<sup>3</sup>, 351<sup>3</sup>, 352<sup>3</sup></p> <p>3 <u>Chosen from</u> JPER 225<sup>3</sup>; <u>MPER 233<sup>3</sup>, MPER 234<sup>3</sup></u></p> <p>6 MPER 251<sup>3</sup>, 252<sup>3</sup></p> <p>6 MPER 351<sup>3</sup> and 352<sup>3</sup> or MPER 390<sup>6</sup></p> <p>6 MPER 490<sup>6</sup></p> <p>6 MHIS <u>203<sup>3</sup>, 204<sup>3</sup></u> or, if exempt, MHIS electives</p> <p>6 MHIS electives, which may include MUSI 421<sup>3</sup></p> <p>12 Chosen from MPER 201<sup>3</sup>, 223<sup>3</sup>, 298<sup>3</sup>, 301<sup>3</sup>, 321<sup>3</sup>, 322<sup>3</sup>, 323<sup>3</sup>, 361<sup>3</sup>, 398<sup>3</sup>, 401<sup>3</sup>, 421<sup>3</sup>, 422<sup>3</sup>, 423<sup>3</sup>, 498<sup>3</sup></p>
<p><b>Rationale:</b> There are new course codes for each of the two unique choirs, MPER 233 (University Choir) and 233 (Chamber Choir). MHIS 200 is being replaced by MHIS 203, 204 to offer greater clarity in the contents as well as flexibility in course selection. The MPER x99<sup>6</sup> codes are infrequently used.</p> <p><b>Resource Implications:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM – (please fill in all the appropriate information)**

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020

Implementation Month/Year: September 2019

Faculty: Fine Arts

Department: MUSIC

Program: Major in Music

Degree: BFA

Section Title: 81.100

Type of Change: (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

Editorial  Requirements  Regulations

New Program  Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>54 BFA Major in Music</b>            15 MUSI 211<sup>3</sup>, 212<sup>3</sup>, 251<sup>3</sup>, 252<sup>3</sup>, 351<sup>3</sup>            3 Chosen from JPER 225<sup>3</sup>, MPER 201<sup>3</sup>, 223<sup>3</sup>, <del>234<sup>3</sup></del>            3 Chosen from MPER 361<sup>3</sup>, MUSI 322<sup>3</sup>, MUSI 421<sup>3</sup>            6 MHIS <del>200<sup>6</sup></del> or, if exempt, MHIS electives            3 <del>MHIS 334<sup>3</sup></del>            6 <del>MUSI 404<sup>6</sup></del>            18 Department of Music electives to be chosen from a minimum of two course groups*  <i>*Department of Music electives are organized into seven groups. The distribution is capped at a number of credits (3 to 12 depending upon the group) so that course selection must be drawn from at least two groups.</i></p>	<p><b>54 BFA Major in Music</b>            15 MUSI 211<sup>3</sup>, 212<sup>3</sup>, 251<sup>3</sup>, 252<sup>3</sup>, 351<sup>3</sup>            3 Chosen from JPER 225<sup>3</sup>, MPER 201<sup>3</sup>, 223<sup>3</sup>, <u>233<sup>3</sup>, 234<sup>3</sup></u>            3 Chosen from MPER 361<sup>3</sup>, MUSI 322<sup>3</sup>, MUSI 421<sup>3</sup>            6 MHIS <u>203<sup>3</sup>, 204<sup>3</sup></u> or, if exempt, MHIS electives            3 <u>Chosen from MHIS courses at the 300 and 400 level</u>            3 <u>MUSI 402<sup>3</sup></u>            21 Department of Music electives to be chosen from a minimum of two course groups*  <i>*Department of Music electives are organized into seven groups. The distribution is capped at a number of credits (3 to 12 depending upon the group) so that course selection must be drawn from at least two groups. <a href="#">See Fine Arts online program guides, Music, Group Listings.</a></i></p>
<p><b>Rationale:</b> There are new course codes for each of the two unique choirs, MPER 233 (University Choir) and MPER 234 (Chamber Choir), providing students with clarity of selection. MHIS 200 is being replaced by two courses (MHIS 203, 204 are currently also offered with MHIS 200) to offer greater clarity in the contents as well as flexibility in course selection. MUSI 311 (Aural Perception III) is being added as it is required in the Specialization in Music Performance. MHIS 331 is being replaced by a "Choice" provision to give more selection at the 300 and 400-level MHIS electives. MUSI 401 (Capstone) is being reduced in credit and renumbered as MUSI 402 to conform to the other Capstone course structures in Music. There is added information about the seven elective groups for clarification, and also to direct students towards appropriate online Faculty of Fine Arts resources (the Group Listings pages). Note that the group listings do not necessarily follow the titles of the various Department of Music Majors, Minors or Specializations.</p>	
<p><b>Resource Implications:</b> None.</p>	

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER: EAST 204**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

Implementation Month/Year: September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><del><b>EAST 204 — Analog Studio Techniques (3 credits)</b></del>  <del>Prerequisite: EAST 203. A lecture/workshop introduction to the analog studio. This course offers continued study and practice of the Acousmatic and Sound Art forms historical, aesthetic, and compositional assignments, as well as continued development of classic and contemporary electroacoustic techniques as they relate to the analog electroacoustic studio. Aspects of the studio including the basics of recording, tape manipulation techniques, mixing and multi-track recording, analog synthesis and signal processing are introduced and covered. Related topics in acoustics, psychoacoustics, hearing, and audio technology are covered in order to provide a background for effective work in the electroacoustic studio environment.</del>  <del>NOTE: Students who have received credit for EAMT 204, or for this topic under an EAMT 398 or 399 number, may not take this course for credit.</del>  <del>NOTE: Students in a major, minor, or specialization program in the Department of Music may not apply this course for credit in a 90-credit degree program.</del></p>	
<p><b>Rationale:</b> This course has not been offered for a decade, and with the evolution of the program, no longer has a place. There are no facilities or equipment available in which to teach it.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 361**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>EAST 361</b>      <b>Current Sound Practice Seminar</b> (3 credits)            Prerequisite: <del>EAST 205, or EAST 203 and 204.</del> Topics vary from year to year, but may include such elements as glitch, noise, microsound, <del>Pl*nderphonics</del>, collage, game sound, <del>and ring tones.</del>  <i>NOTE: Students who have received credit for this topic under an EAMT 398 or 498 number may not take this course for credit.</i></p>	<p><b>EAST 361</b>      <b>Current Sound Practice Seminar</b> (3 credits)            Prerequisite: <u>EAST 305 previously or concurrently.</u> Topics vary from year to year, but may include such elements as <u>sound design</u>, glitch, noise, microsound, <u>plunderphonics</u>, collage, <u>and</u> game sound.  <i>NOTE: Students who have received credit for this topic under an EAMT 398 or 498 number may not take this course for credit.</i></p>
<p><b>Rationale:</b> The prerequisite is being changed to require students be engaged in the content of the second level of electroacoustic composition, EAST 305, either previously or concurrently while taking this course. EAST 203 and 204 are no longer applicable to programs in electroacoustics. Minor updating of the description to reflect how the course has been taught for the past decade and to change a copyrighted term to a more generic yet similar one.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 362**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>EAST 362</b>    <b>Virtual Modular Synthesis</b> (3 credits)            Prerequisite: <del>EAST 205, or EAST 203 and 204</del>. A detailed study of modular synthesis techniques <del>and their application in live electroacoustics</del>.  <i>NOTE: Students who have received credit for this topic under an EAMT 398 number may not take this course for credit.</i></p>	<p><b>EAST 362</b>    <b>Virtual Modular Synthesis</b> (3 credits)            Prerequisite: <u>EAST 305 previously or concurrently</u>. A detailed study of <u>selected digital</u> synthesis techniques.  <i>NOTE: Students who have received credit for this topic under an EAMT 398 number may not take this course for credit.</i></p>
<p><b>Rationale:</b> The prerequisite is being changed to require students be engaged in the content of the second level of electroacoustic composition, EAST 305, either previously or concurrently while taking this course. EAST 203 and 204 are no longer applicable to programs in electroacoustics. Minor updating of the description to reflect how the course has been taught for the past decade.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 363**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>EAST 363      <i>Concordia Laptop Orchestra I (CLOrk)</i></b> (3 credits)            Prerequisite: EAST 305 previously or concurrently; <del>enrolment in the Major or Minor in Electroacoustic Studies</del>. The Concordia Laptop Orchestra specializes in networked and interdisciplinary creation and performance. It performs physically and telematically with ensembles and soloists worldwide.  <i>NOTE: Students who have received credit for this topic under an EAST 398 number may not take this course for credit.</i></p>	<p><b>EAST 363      <i>Concordia Laptop Orchestra I (CLOrk)</i></b> (3 credits)            Prerequisite: <u>EAST 305 previously or concurrently</u>. The Concordia Laptop Orchestra specializes in networked and interdisciplinary creation and performance. It performs physically and telematically with ensembles and soloists worldwide.  <i>NOTE: Students who have received credit for this topic under an EAST 398 number may not take this course for credit.</i></p>
<p><b>Rationale:</b> The deleted phrase is redundant.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 365**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 365</b>     <b>Multi-channel Composition: Sound and Spaces</b> (3 credits)  Prerequisite: <del>EAST 205, or EAST 203 and 204.</del> A seminar workshop on composition for four or more channels. The topics may include fixed media presentations, sound projection techniques, and multi-channel installation art. Topics vary from year to year.  NOTE: Students who have received credit for this topic under an EAMT 398 or 498 number may not take this course for credit.</p>	<p><b>EAST 365</b>     <b>Multi-channel Composition: Sound and Spaces</b> (3 credits)  Prerequisite: <u>EAST 305 previously or concurrently.</u> A seminar workshop on composition for four or more channels. The topics may include fixed media presentations, sound projection techniques, and multi-channel installation art. Topics vary from year to year.  NOTE: Students who have received credit for this topic under an EAMT 398 or 498 number may not take this course for credit.</p>
<p><b>Rationale:</b> The prerequisite is being changed to require students be engaged in the content of the second level of electroacoustic composition, EAST 305, either previously or concurrently while taking this course. EAST 203 is no longer applicable to programs in electroacoustics, and EAST 204 is being deleted.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 398**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<b>EAST 398</b> <b><i>Special Topics in Electroacoustics <del>and Technology</del></i></b> (3 credits) Prerequisite: Written permission of the Department of Music. A study of a selected area not available in other courses in electroacoustics <del>and technology</del> .	<b>EAST 398</b> <b><i>Special Topics in Electroacoustics</i></b> (3 credits) Prerequisite: Written permission of the Department of Music. A study of a selected area not available in other courses in electroacoustics.
<b>Rationale:</b> Updating vocabulary and range of content. The term “Technology’ in the title is a hold over from the previous EAMT designation for the program, <u>E</u> lectro <u>a</u> coustic <u>M</u> usic <u>T</u> echnology. This was removed because the program does not teach technology, it uses it.	
<b>Resource Implications:</b> None.	
<b>Other Programs within which course is listed:</b> None.	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 399**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<b>EAST 399</b> <b><i>Special Topics in Electroacoustics <del>and Technology</del></i></b> (6 credits) Prerequisite: Written permission of the Department of Music. A study of a selected area not available in other courses in electroacoustics <del>and technology</del> .	<b>EAST 399</b> <b><i>Special Topics in Electroacoustics</i></b> (6 credits) Prerequisite: Written permission of the Department of Music. A study of a selected area not available in other courses in electroacoustics.
<b>Rationale:</b> Updating vocabulary and range of content. The term "Technology" in the title is a hold over from the previous EAMT designation for the program, <u>E</u> lectro <u>a</u> coustic <u>M</u> usic <u>T</u> echnology. This was removed because the program does not teach technology, it uses it.	
<b>Resource Implications:</b> None.	
<b>Other Programs within which course is listed:</b> None.	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 461**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 461 Capstone Project Seminar I</b> (3 credits)            Prerequisite: <del>Enrolment in the Major or Minor in Electroacoustic Studies; EAST 305</del>; 60 credits completed <del>in the program</del>. An open seminar/workshop environment where students are encouraged to work in a collaborative, cross-<del>discipline</del> or multicultural fashion.  <i>NOTE: Students who have received credit for this topic under an EAMT 498 number may not take this course for credit.</i></p>	<p><b>EAST 461 Capstone Project Seminar I</b> (3 credits)            Prerequisite: <u>EAST 406</u>; 60 credits completed. An <u>advanced</u>, open seminar/workshop environment where students are encouraged to work <u>on individual projects, and</u> in a collaborative, cross-<u>disciplinary</u> or multicultural fashion.  <i>NOTE: Students who have received credit for this topic under an EAMT 498 number may not take this course for credit.</i></p>
<p><b>Rationale:</b> Minor updating of the description to reflect how the course has been taught for the past decade as well as a clarification that EAST 406 is the prerequisite. The deleted phrase is redundant. The student must be enrolled in the Major or Minor in Electroacoustic Studies in order to take the prerequisite course.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 462**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 462     <del>Capstone Project Seminar II</del></b> (3 credits)  Prerequisite: <del>Enrolment in the Major or Minor in Electroacoustic Studies; EAST 305; 60 credits completed in the program.</del> A continuation of EAST 461.  NOTE: Students who have received credit for this topic under an EAMT 498 number may not take this course for credit</p>	<p><b>EAST 462     <u>Capstone Project Seminar II</u></b> (3 credits)  Prerequisite: <u>EAST 461</u>. A continuation of EAST 461.  NOTE: Students who have received credit for this topic under an EAMT 498 number may not take this course for credit.</p>
<p><b>Rationale:</b> The deleted phrase is redundant. The student must be enrolled in an Electroacoustic program in order to take the prerequisite course. EAST 305 is no longer the appropriate level prerequisite course. Students will have had to have completed EAST 305 before taking EAST 461, the correct prerequisite.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 463**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<b>EAST 463 Concordia Laptop Orchestra II (CLOrk)</b> (3 credits) Prerequisite: EAST 363; <del>enrolment in the Major or Minor in Electroacoustic Studies</del> . A continuation of EAST 363. <i>NOTE: Students who have received credit for this topic under an EAST 398 number may not take this course for credit.</i>	<b>EAST 463 Concordia Laptop Orchestra II (CLOrk)</b> (3 credits) Prerequisite: EAST 363. A continuation of EAST 363. <i>NOTE: Students who have received credit for this topic under an EAST 398 number may not take this course for credit.</i>
<b>Rationale:</b> The deleted phrase is redundant. The student must be enrolled in an Electroacoustic program in order to take the prerequisite course.	
<b>Resource Implications:</b> None.	
<b>Other Programs within which course is listed:</b> None.	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 465**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 465      <i>Capstone Recording Project I</i></b> (3 credits)  Prerequisite: EAST 452; <del>enrolment in the Major or Minor in Electroacoustic Studies</del>. An open workshop where students engage in intensive studies in applied recording arts. Students are expected to collaborate with other musicians from the Department of Music.  <i>NOTE: Students who have received credit for EAST 460 may not take this course for credit.</i></p>	<p><b>EAST 465      <i>Capstone Recording Project I</i></b> (3 credits)  Prerequisite: EAST 452 <u>previously or concurrently</u>. An open workshop where students engage in intensive studies in applied recording arts. Students are expected to collaborate with other musicians from the Department of Music.  <i>NOTE: Students who have received credit for EAST 460 may not take this course for credit.</i></p>
<p><b>Rationale:</b> The deleted phrase is redundant. The student must be enrolled in an Electroacoustic program in order to take the prerequisite course.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 466**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

- Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 466     <i>Capstone Recording Project II</i></b> (3 credits)  Prerequisite: EAST 465; 60 credits completed <del>in the program; enrolment in the Major or Minor in Electroacoustic Studies</del>. An open workshop where students engage in intensive studies in applied recording arts. Students are expected to collaborate with other musicians from the Department of Music.  <i>NOTE: Students who have received credit for EAST 460 may not take this course for credit.</i></p>	<p><b>EAST 466     <i>Capstone Recording Project II</i></b> (3 credits)  Prerequisite: EAST 465; 60 credits completed. An open workshop where students engage in intensive studies in applied recording arts. Students are expected to collaborate with other musicians from the Department of Music.  <i>NOTE: Students who have received credit for EAST 460 may not take this course for credit.</i></p>
<p><b>Rationale:</b> The deleted phrase is redundant. The student must be enrolled in an Electroacoustic program in order to take the prerequisite course. It is considered adequate that a student complete 60 credits of course work before taking this course, but not so exclusively within their program.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 471**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020  
**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an “X”) **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 471* <i>Independent Study I</i></b> (3 credits)            Prerequisite: Written permission of the Department of Music. A student-designed course of study, approved by an advisor, that focuses on an area of electroacoustics <del>and/or music technology</del>.</p> <p><i>*Students may count a maximum of nine credits in independent studies towards their degree program.</i></p>	<p><b>EAST 471* <i>Independent Study I</i></b> (3 credits)            Prerequisite: <u>60 credits completed and</u> written permission of the Department of Music. A student-designed course of study, approved by an advisor, that focuses on an area of electroacoustics.</p> <p><i>*Students may count a maximum of nine credits in independent studies towards their degree program.</i></p>
<p><b>Rationale:</b> Clarification that a student must have finished 60 credits of instruction before being permitted to take the course. Similar to EAST 398 and 399, the reference to “technology” is a vestige of the old EAMT, Electroacoustic and Music Technology Major. Technology is no longer a focal point for the electroacoustic programs of study.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 481**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 481 <i>Supervised Internship I</i></b> (3 credits)            Prerequisite: <del>Enrolment in the Major in Electroacoustic Studies</del>; 60 credits completed; written permission of the Department of Music. This course provides students with the opportunity to obtain credit for sound-focused work completed for a recognized organization, or a sound-focused project under the joint supervision of a qualified professional and a full-time faculty member.</p>	<p><b>EAST 481 <i>Supervised Internship I</i></b> (3 credits)            Prerequisite: <u>Enrolment in an Electroacoustic program</u>; 60 credits completed; written permission of the Department of Music. This course provides students with the opportunity to obtain credit for sound-focused work completed for a recognized organization, or a sound-focused project under the joint supervision of a qualified professional and a full-time faculty member.</p>
<p><b>Rationale:</b> The revised prerequisite permits students taking any Electroacoustic program to take this course. This makes accommodation for future programs in Electroacoustics.</p>	
<p><b>Resource Implications:</b> None.</p>	
<p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 482**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 482 <i>Supervised Internship II</i></b> (3 credits)            Prerequisite: <del>Enrolment in the Major in Electroacoustic Studies</del> and written permission of the Department of Music. This course provides students with the opportunity to obtain credit for sound-focused work completed for a recognized organization, or a sound-focused project under the joint supervision of a qualified professional and a full-time faculty member.</p>	<p><b>EAST 482 <i>Supervised Internship II</i></b> (3 credits)            Prerequisite: <u>EAST 481</u> and written permission of the Department of Music. This course provides students with the opportunity to obtain credit for sound-focused work completed for a recognized organization, or a sound-focused project under the joint supervision of a qualified professional and a full-time faculty member.</p>
<p><b>Rationale:</b> The deleted phrase is redundant. The student must be enrolled in an Electroacoustic program in order to take the prerequisite course.</p>	
<p><b>Resource Implications:</b> None.</p>	
<p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: EAST 498**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: MUSIC**

**Program: Major and Minor in Electroacoustic Studies**

**Degree: BFA**

**Section Title: 81.100**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<b>EAST 498 <i>Special Topics in Electroacoustics and Technology</i></b> (3 credits) Prerequisite: Written permission of the Department of Music. An advanced study of a selected area not available in other courses in electroacoustics <b>and technology.</b>	<b>EAST 498 <i>Special Topics in Electroacoustics</i></b> (3 credits) Prerequisite: Written permission of the Department of Music. An advanced study of a selected area not available in other courses in electroacoustics.
<p><b>Rationale:</b> Updating vocabulary and range of content. The term "Technology" in the title is a hold over from the previous EAMT designation for the program, <u>E</u>lectro<u>a</u>coustic <u>M</u>usic <u>T</u>echnology. This was removed because the program does not teach technology, it uses it.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)



**DOSSIER TITLE:** MUSI-17

**COURSE NUMBER:** MHIS 200

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<p>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</p> <p><del><b>MHIS 200 — Music History and Society (6 credits)</b></del> <del>A survey of musical styles in their social context, from pre-history to the present day. While emphasis is on the mainstream of the Western tradition, attention is also given to folk, popular, and jazz styles, as well as to the music of other cultures.</del> <del>NOTE A/See §200.3</del> <del>NOTE: Students who have received credit for MHIS 201 or 202, or for this topic under a MHIS 498 number, may not take this course for credit.</del></p>	
<p><b>Rationale:</b> MHIS 200<sup>6</sup> has been delivered concurrently with MHIS 203<sup>3</sup> and 204<sup>3</sup>. Delivering the first-year music history survey in two separate one-term courses gives the Department the flexibility to offer one course per year in alternation with a wider range of MHIS topics courses.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> Minor in Music</p>	





**DOSSIER TITLE:** MUSI-17  
**COURSE NUMBER:** MHIS 298  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020  
**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA **Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<b>MHIS 298</b> <i>Special Topics in Music History</i> (3 credits) Prerequisite: <del>W</del> ritten permission of the Department of Music. A study of a selected area not available in other courses in music history.	<b>MHIS 298</b> <i>Special Topics in Music History</i> (3 credits) Prerequisite: <a href="#">Enrolment in a program in the Department of Music</a> or written permission of the Department of Music. A study of a selected area not available in other courses in music history.
<b>Rationale:</b> For a course at the 200 level, students registered in Department of Music programs should be able to register directly without the need for written permission. Non-Music students may seek written permission based on their eligibility and aptitude for the course in question.	
<b>Resource Implications:</b> None	
<b>Other Programs within which course is listed:</b> None.	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MHIS 301**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information) **Calendar for Academic Year: 2019/2020**  
 Proposed  Undergraduate or  Graduate Curriculum Changes **Implementation Month/Year: September 2019**

**Faculty: Fine Arts** **Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music** **Degree: BFA** **Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><del><b>MHIS 301 — Medieval and Renaissance Music (3 credits)</b>            Prerequisite: MHIS 200; MUSI 211, 251, 252. The development of the basic patterns of Western music is traced through the Middle Ages. The resulting musical styles from the mid-15th to the end of the 16th century are examined in the context of the cultural changes which shaped the humanistic age.</del></p>	
<p><b>Rationale:</b> The Department of Music wishes to delete MHIS 301 from the Calendar, along with MHIS 302. We wish to replace these two separate courses with a single new 3-credit course, MHIS 306 (<i>Early Music Influences on Contemporary Creative Music Practices</i>) to be more in line with the Department's evolving orientation towards composition, creativity, contemporary trends and future directions.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MHIS 302**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><del><b>MHIS 302</b> — <b>Music of the Baroque</b> (3 credits)            Prerequisite: MHIS 200; MUSI 211, 251, 252. The evolution of "common practice" is traced in the forms, styles, and performance practices of the great masters and schools of the early-17th to the mid-18th century.</del></p>	
<p><b>Rationale:</b> The Department of Music wishes to delete MHIS 302 (and 301) from the Calendar. We wish to replace these two separate courses with a single new 3-credit course, MHIS 306 (<i>Early Music Influences on Contemporary Creative Music Practices</i>) to be more in line with the Department's evolving orientation towards composition, creativity, contemporary trends and future directions.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER: MHIS 303**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: Music**

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA **Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<del><b>MHIS 303 — Classical and Early Romantic Music (3 credits)</b> Prerequisite: MHIS 200; MUSI 211, 251, 252. A study of late-18th- and early-19th-century music. Representative works will be studied from the late Rococo, through the age of Haydn, Mozart, and Beethoven, and into the early Romantic style of Schubert.</del>	
<p><b>Rationale:</b> The Department of Music wishes to delete MHIS 303 (and 304) from the Calendar. We wish to replace these two separate courses with a single new 3-credit course, MHIS 307 (<i>Common Practice Influences on Contemporary Creative Music Practices</i>) to be more in line with the Department's evolving orientation towards composition, creativity, contemporary trends and future directions.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MHIS 304**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><del><b>MHIS 304 — Romanticism in Music (3 credits)</b>            Prerequisite: MHIS 200; MUSI 211, 251, 252. A study of the music of the 19th and early 20th century. Representative works, styles and performance practices are studied as expressions of the romantic consciousness.</del></p>	
<p><b>Rationale:</b> The Department of Music wishes to delete MHIS 304 (and 303) from the Calendar. We wish to replace these two separate courses with a single new 3-credit course, MHIS 307 (<i>Common Practice Influences on Contemporary Creative Music Practices</i>) to be more in line with the Department's evolving orientation towards composition, creativity, contemporary trends and future directions.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)





**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER:**

**NEW COURSE NUMBER: MHIS 307**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number  Course Title  Credit Value  Prerequisite  Course Description  
 Editorial  Other - Specify: Note  New Course  Course Deletion

<b>Present Text (Text from 20__ – 20__ Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted)	and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.
	<p><b><u>MHIS 307 Common Practice Influences on Contemporary Creative Music Practices (3 credits)</u></b> <u>Prerequisite: MHIS 203, 204, or equivalent. This course studies in depth the influence of the middle to high Baroque, Rococo, Classical and Romantic periods (broadly known as "common practice") on 20<sup>th</sup> and 21<sup>st</sup>-century composers and creative practices in music. The course includes historical, musicological, and critical analysis, as well as speculative discussion of future trends.</u> <u>Note: Students who have received credit for MHIS 303 or 304 may not take this course for credit.</u></p>
<p><b>Rationale:</b> The Department of Music wishes to replace MHIS 303 and 304 with a single new 3-credit course, which will examine the same time periods focusing on their influences and impact on current creative musical practices. MHIS 307 is intended to be more in line with the Department's evolving orientation towards composition, creativity, contemporary trends and future directions.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MHIS 331**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>MHIS 331      <i>Aesthetics and Musical Styles (3 credits)</i></b>            Prerequisite: MHIS <del>200</del>. A survey and exploration of thought and writings on the meaning, intent, practice, and appreciation of music and its various manifestations in different cultures or eras, aiming to provide students with the tools and background to think deeply about the meaning and direction of musical language.</p>	<p><b>MHIS 331      <i>Aesthetics and Musical Styles (3 credits)</i></b>            Prerequisite: MHIS <u>203, 204</u>. A survey and exploration of thought and writings on the meaning, intent, practice, and appreciation of music and its various manifestations in different cultures or eras, aiming to provide students with the tools and background to think deeply about the meaning and direction of musical language.</p>
<p><b>Rationale:</b> These changes are to reflect the changes made to the delivery of MHIS 200 as MHIS 203 and 204.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)





**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER:**

**NEW COURSE NUMBER: MPER 233**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Major in Music, Specialization in Jazz Studies, Specialization in Music Composition, Specialization in Music Performance **Degree:** BFA

**Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 20__ – 20__ Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	<p><b><u>MPER 233      University Choir I (3 credits)</u></b> <u>Students enrolled in this course participate in the University Choir.</u> <u>NOTE: Auditions are held during the first class and students who do not pass the audition are required to withdraw from the course prior to the DNE deadline.</u> <u>NOTE: This is a full-year course.</u> <u>NOTE: Students who have received credit for MPER 221 or 231 may not take this course for credit.</u></p>
<p><b>Rationale:</b> This new course description replaces MPER 231, section A, providing a clear distinction between the two types of choirs offered; University Choir and the Chamber Choir.</p> <p><b>Resource Implications:</b> None. This course is replacing one section of a regularly offered course.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER:**

**NEW COURSE NUMBER: MPER 234**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Major in Music, Specialization in Jazz Studies, Specialization in Music Composition, Specialization in Music Performance **Degree:** BFA

**Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

Present Text (Text from 20__ – 20__ Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
	<p><u><b>MPER 234 Chamber Choir I (3 credits)</b></u>  <u>Students enrolled in this course participate in the Chamber choir.</u>  <u>NOTE: Auditions are held during the first class and students who do not pass the audition are required to withdraw from the course prior to the DNE deadline.</u>  <u>NOTE: This is a full-year course.</u>  <u>NOTE: Students who have received credit for MPER 221 or 231 may not take this course for credit.</u></p>
<p><b>Rationale:</b> This new course description replaces MPER 231, section B, providing a clear distinction between the two types of choirs offered; University Choir and the Chamber Choir.</p> <p><b>Resource Implications:</b> None. This course is replacing one section of a regularly offered course.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 251**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MPER 251 Private Study I</b> (3 credits)            Prerequisite: <del>W</del>ritten permission of the Department of Music. This course offers individual vocal or instrumental instruction in an approved area of music coordinated with the student's program.  <i>NOTE: Students are required to assume part of the cost of private lessons.</i>  <i>NOTE: Students who have received credit for JPER 251 or MUSI 231 may not take this course for credit.</i></p>	<p><b>MPER 251 Private Study I</b> (3 credits)            Prerequisite: <a href="#">Enrolment in the Major in Music or the Specialization in Music Performance or the Specialization in Music Composition</a>; written permission of the Department of Music. This course offers individual vocal or instrumental instruction in an approved area of music coordinated with the student's program.  <i>NOTE: Students are required to assume part of the cost of private lessons.</i>  <i>NOTE: Students who have received credit for JPER 251 or MUSI 231 may not take this course for credit.</i></p>
<p><b>Rationale:</b> Due to budgetary considerations, Private Study is restricted only to students enrolled in the Major in Music and its Specializations.</p>	
<p><b>Resource Implications:</b> None.</p>	
<p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 252**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: Addition of note       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MPER 252 Private Study II</b> (3 credits)            Prerequisite: MPER 251 <del>and</del> written permission of the Department of Music.            A continuation of MPER 251.  <i>NOTE: Students who have received credit for JPER 252 or MUSI 232 may not take this course for credit.</i></p>	<p><b>MPER 252 Private Study II</b> (3 credits)            Prerequisite: MPER 251; <a href="#">enrolment in the Major in Music or the Specialization in Music Performance or the Specialization in Music Composition</a>; written permission of the Department of Music. A continuation of MPER 251.  <a href="#">NOTE: Students are required to assume part of the cost of private lessons.</a>  <i>NOTE: Students who have received credit for JPER 252 or MUSI 232 may not take this course for credit.</i></p>
<p><b>Rationale:</b> Due to budgetary considerations, Private Study is restricted only to students enrolled in the Major in Music and its Specializations.</p>	
<p><b>Resource Implications:</b> None.</p>	
<p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER: MPER 301**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Major in Music

**Degree:** BFA

**Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<p>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</p> <p><b>MPER 301      <i>Orchestra II</i></b> (3 credits) Prerequisite: MPER 201 <del>or</del> written permission of the Department of Music. A continuation of MPER 201. Students enrolled in this course participate in a large orchestral ensemble. For evaluation, a supervising full-time professor <del>will</del> observe a minimum of two rehearsals and/or performances, and <del>may</del> consult with the ensemble director. <i>NOTE: Students who have received credit for this course as MPER 300 or 498 may not take this course for credit.</i></p>	<p><b>MPER 301      <i>Orchestra II</i></b> (3 credits) Prerequisite: MPER 201; written permission of the Department of Music <u>upon successful audition</u>. A continuation of MPER 201. Students enrolled in this course participate in a large orchestral ensemble. For evaluation, a supervising full-time <u>Music</u> professor <u>observes</u> a minimum of two rehearsals and/or performances, and <u>consults</u> with the ensemble director. <i>NOTE: Students who have received credit for this course as MPER 300 or 498 may not take this course for credit.</i></p>
<p><b>Rationale:</b> Concordia has not had an orchestra for many years, but students still find excellent learning experiences from participating in other orchestras. The Music Department has agreements with a number of orchestras in Montreal who will accept our students, after a successful audition, into their orchestra. It is necessary that supervision be undertaken by a full-time faculty member from the Music Department to assure academic rigor. It is also mandatory that a consultation is made with the ensemble director to get direct input on the performance of the student.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)



**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 331**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Major in Music, Specialization in Music Performance**

**Degree: BFA**

**Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><del><b>MPER 331 — Classical Vocal Repertoire I (3 credits)</b></del>  <del>Prerequisite: MPER 251 in voice previously or concurrently. A study of solo vocal repertoire. Vocal repertoire from the late Renaissance to the present is examined and performed by students. This seminar/workshop covers such topics as stylistic features, treatment of poetry and text, recital preparation, programming, vocal ornamentation, and current trends in vocal performance.</del></p>	
<p><b>Rationale:</b> This course has not been offered in many years, and the content is better covered in Private Study courses, specifically in MPER 390 and MPER 490.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 332**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information) **Calendar for Academic Year: 2019/2020**  
 Proposed  Undergraduate or  Graduate Curriculum Changes **Implementation Month/Year: September 2019**

**Faculty: Fine Arts** **Department: Music**

**Program: Major in Music, Specialization in Jazz Studies** **Degree: BFA** **Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><del><b>MPER 332</b> — <b>Choir II (3 credits)</b></del>  <del>Prerequisite: MPER 231. A continuation of MPER 231.</del>  <del>NOTE: This is a full-year course.</del>  <del>NOTE: Students who have received credit for this course as MPER 498 or MPER 420 may not take this course for credit.</del></p>	
<p><b>Rationale:</b> This course is being replaced by two new courses, MPER 333 and MPER 334, that reflect that there are two types of choir courses being offered.</p> <p><b>Resource Implications:</b> None. This course is regularly offered in two sections, which will be replaced by individual separate courses.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER:**

**NEW COURSE NUMBER: MPER 333**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Major in Music, Specialization in Jazz Studies**

**Degree: BFA**

**Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 20__ – 20__ Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	<b><u>MPER 333      <i>University Choir II</i> (3 credits)</u></b> <u>Prerequisite: MPER 233. A continuation of MPER 233.</u> <u>NOTE: This is a full-year course.</u> <u>NOTE: Students who have received credit for this course as MPER 498, 420 or 332 may not take this course for credit.</u>
<b>Rationale:</b> This new course description replaces MPER 332, section A, providing a clear distinction between the two types of choirs offered; University Choir and the Chamber Choir.	
<b>Resource Implications:</b> None. This course is replacing one section of a regularly offered course.	
<b>Other Programs within which course is listed:</b> None.	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER:**

**NEW COURSE NUMBER: MPER 334**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Major in Music, Specialization in Jazz Studies

**Degree:** BFA

**Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 20__ – 20__ Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	<p><b><u>MPER 334 Chamber Choir II (3 credits)</u></b> <u>Prerequisite: MPER 234. A continuation of MPER 234.</u> <u>NOTE: This is a full-year course.</u> <u>NOTE: Students who have received credit for this course as MPER 498, 420 or 332 may not take this course for credit.</u></p>
<p><b>Rationale:</b> This new course description replaces MPER 332, section B, providing a clear distinction between the two types of choirs offered; University Choir and the Chamber Choir.</p> <p><b>Resource Implications:</b> None. This course is replacing one section of a regularly offered course.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER: MPER 351**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Major in Music, Specialization in Music Composition

**Degree:** BFA

**Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<p>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</p> <p><b>MPER 351</b>      <b>Private Study III</b> (3 credits) Prerequisite: MPER 252; second-year standing*; written permission of the Department of Music. A continuation of MPER 252. <i>NOTE: Students are required to assume part of the cost of private lessons.</i> <i>NOTE: Students who have received credit for JPER 351, MPER 331 or 390 may not take this course for credit.</i> <i>*66 or fewer credits remaining in degree program.</i></p>	<p><b>MPER 351</b>      <b>Private Study III</b> (3 credits) Prerequisite: MPER 252; second-year standing*; <a href="#">enrolment in the Major in Music or the Specialization in Music Performance or the Specialization in Music Composition</a>; written permission of the Department of Music. A continuation of MPER 252. <i>NOTE: Students are required to assume part of the cost of private lessons.</i> <i>NOTE: Students who have received credit for JPER 351, MPER 331 or 390 may not take this course for credit.</i> <i>*66 or fewer credits remaining in degree program.</i></p>
<p><b>Rationale:</b> Due to budgetary considerations, Private Study is restricted only to students enrolled in the Major in Music and its Specializations.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)



**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 401**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information) **Calendar for Academic Year: 2019/2020**  
 Proposed  Undergraduate or  Graduate Curriculum Changes **Implementation Month/Year: September 2019**

**Faculty: Fine Arts** **Department: Music**

**Program: Specialization in Music Performance, Major in Music** **Degree: BFA** **Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MPER 401</b>      <b>Orchestra III</b> (3 credits)            Prerequisite: MPER 301; written permission of the Department of Music. A continuation of MPER 301. Students enrolled in this course participate in a large orchestral ensemble. For evaluation, a supervising full-time professor <del>will</del> observe a minimum of two rehearsals and/or performances, and <del>may</del> consult with the ensemble director.</p>	<p><b>MPER 401</b>      <b>Orchestra III</b> (3 credits)            Prerequisite: MPER 301; written permission of the Department of Music. A continuation of MPER 301. Students enrolled in this course participate in a large orchestral ensemble. For evaluation, a supervising full-time <u>Music</u> professor <u>observes</u> a minimum of two rehearsals and/or performances, and <u>consults</u> with the ensemble director.</p>
<p><b>Rationale:</b> Concordia has not had an orchestra for many years, but students still find excellent learning experiences from participating in other orchestras. The Music Department has agreements with a number of orchestras in Montreal who will accept our students, after a successful audition, into their orchestra. It is necessary that supervision be undertaken by a full-time faculty member from the Music Department to assure academic rigor. It is also mandatory that a consultation is made with the ensemble director to get direct input on the performance of the student.</p>	
<p><b>Resource Implications:</b> None.</p>	
<p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER: MPER 422**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: Music**

**Program: Major in Music, Specialization in Music Performance**

**Degree: BFA**

**Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<del><b>MPER 422 — Chamber Ensemble IV (3 credits)</b></del> <del>Prerequisite: MPER 421. A continuation of MPER 421.</del>	
<p><b>Rationale:</b> Course deletion to harmonize program structure with all other ensemble courses in the program which have only three levels.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER: MPER 431**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Major in Music**

**Degree: BFA**

**Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<del>MPER 431 — Classical Vocal Repertoire II (3 credits)</del> <del>Prerequisite: MPER 331. A continuation of MPER 331.</del>	
<b>Rationale:</b> This course has not been offered in many years, and the content is better covered in Private Study courses, specifically in MPER 390 and MPER 490. <b>Resource Implications:</b> None. <b>Other Programs within which course is listed:</b> None.	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CS GS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 432**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: Music**

**Program: Major in Music, Specialization in Jazz Studies**

**Degree: BFA**

**Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><del><b>MPER 432 — Choir III (3 credits)</b></del>  <del>Prerequisite: MPER 331. A continuation of MPER 331.</del>  <del>NOTE: This is a full-year course.</del>  <del>NOTE: Students who have received credit for this course as MPER 498 or MPER 420 may not take this course for credit.</del></p>	
<p><b>Rationale:</b> This course is being replaced by two new courses, MPER 433 and MPER 434, that reflect that there are two types of choir courses being offered.</p> <p><b>Resource Implications:</b> None. This course is regularly offered in two sections, which will be replaced by individual separate courses.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER:**

**NEW COURSE NUMBER: MPER 433**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: Music**

**Program:** Major in Music, Specialization in Jazz Studies

**Degree:** BFA

**Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- |  |   |                                       |  |   |
|--|---|---------------------------------------|--|---|
| <input type="checkbox"/> Course Number | <input type="checkbox"/> Course Title           | <input type="checkbox"/> Credit Value | <input type="checkbox"/> Prerequisite          | <input type="checkbox"/> Course Description |
| <input type="checkbox"/> Editorial     | <input type="checkbox"/> Other - Specify: _____ |                                       | <input checked="" type="checkbox"/> New Course | <input type="checkbox"/> Course Deletion    |

<b>Present Text (Text from 20__ – 20__ Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
	<p><b>MPER 433 <i>University Choir III</i> (3 credits)</b>  <u>Prerequisite: MPER 333. A continuation of MPER 333.</u>  <u>NOTE: This is a full-year course.</u>  <u>NOTE: Students who have received credit for this course as MPER 498, 420 or 432 may not take this course for credit.</u></p>
<p><b>Rationale:</b> This new course description replaces MPER 432, section A, providing a clear distinction between the two types of choirs offered; University Choir and the Chamber Choir.</p> <p><b>Resource Implications:</b> None. This course is replacing one section of a regularly offered course.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER:**

**NEW COURSE NUMBER: MPER 434**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Major in Music, Specialization in Jazz Studies**

**Degree: BFA**

**Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- |  |   |                                       |  |   |
|--|---|---------------------------------------|--|---|
| <input type="checkbox"/> Course Number | <input type="checkbox"/> Course Title           | <input type="checkbox"/> Credit Value | <input type="checkbox"/> Prerequisite          | <input type="checkbox"/> Course Description |
| <input type="checkbox"/> Editorial     | <input type="checkbox"/> Other - Specify: _____ |                                       | <input checked="" type="checkbox"/> New Course | <input type="checkbox"/> Course Deletion    |

<b>Present Text (Text from 20__ – 20__ Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	<p><u><b>MPER 434 Chamber Choir III (3 credits)</b></u>  <u>Prerequisite: MPER 334. A continuation of MPER 334.</u>  <u>NOTE: This is a full-year course.</u>  <u>NOTE: Students who have received credit for this course as MPER 498, 420 or 432 may not take this course for credit.</u></p>
<p><b>Rationale:</b> This new course description replaces MPER 432, section B, providing a clear distinction between the two types of choirs offered; University Choir and the Chamber Choir.</p> <p><b>Resource Implications:</b> None. This course is replacing one section of a regularly offered course.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 451**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Composition**

**Degree: BFA**

**Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MPER 451</b>      <b>Private Study V</b> (3 credits)            Prerequisite: MPER 352; <del>third-year standing in one of the Music specializations; and</del> written permission of the Department of Music. A continuation of MPER 352.  <i>NOTE: Students are required to assume part of the cost of private lessons.</i>  <i>NOTE: Students who have received credit for JPER 451, MPER 490 or MUSI 431 may not take this course for credit.</i>  <i>*33 or fewer credits remaining in degree program.</i></p>	<p><b>MPER 451</b>      <b>Private Study V</b> (3 credits)            Prerequisite: MPER 352; <u>60 credits completed; enrolment in the Specialization in Music Composition;</u> written permission of the Department of Music. A continuation of MPER 352.  <i>NOTE: Students are required to assume part of the cost of private lessons.</i>  <i>NOTE: Students who have received credit for JPER 451, MPER 490 or MUSI 431 may not take this course for credit.</i>  <i>*33 or fewer credits remaining in degree program.</i></p>
<p><b>Rationale:</b> Now that the Specialization in Jazz Studies has its own codes for Private Instruction, MPER 451 only applies to students in the Specialization in Music Composition.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MPER 452**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information) **Calendar for Academic Year: 2019/2020**  
 Proposed  Undergraduate or  Graduate Curriculum Changes **Implementation Month/Year: September 2019**

**Faculty: Fine Arts** **Department: Music**

**Program: Specialization in Music Composition Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number  Course Title  Credit Value  Prerequisite  Course Description  
 Editorial  Other - Specify: addition of note  New Course  Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MPER 452 Private Study VI</b> (3 credits)            Prerequisite: MPER 451 <del>and</del> written permission of the Department of Music.  <del>Enrolment in one of the Music specializations.</del> A continuation of MPER 451.  <i>NOTE: Students who have received credit for JPER 452, MUSI 430 or 432 may not take this course for credit.</i></p>	<p><b>MPER 452 Private Study VI</b> (3 credits)            Prerequisite: MPER 451; <u>enrolment in the Specialization in Music Composition</u>; written permission of the Department of Music. A continuation of MPER 451.  <u><i>NOTE: Students are required to assume part of the cost of private lessons.</i></u>  <i>NOTE: Students who have received credit for JPER 452, MUSI 430 or 432 may not take this course for credit.</i></p>
<p><b>Rationale:</b> Now that the Specialization in Jazz Studies has its own codes for Private Instruction, MPER 452 only applies to students in the Specialization in Music Composition.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)



**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 211**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA **Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MUSI 211      <i>Aural Perception I (3 credits)</i></b>            Prerequisite: Enrolment in the Major or Minor in Music, or written permission of the Department of Music. A course designed to develop the musical ear through intermediate-level sight-singing, dictation, aural analysis, and keyboard skills. <del>The study of aural perception is done through a combination of classroom lectures and workshops.</del>  <i>NOTE: Students who have received credit for this topic under INMS 209, 499, or MUSI 210 may not take this course for credit.</i></p>	<p><b>MUSI 211      <i>Aural Perception I (3 credits)</i></b>            Prerequisite: Enrolment in the Major or Minor in Music <u>or the Specialization in Music Performance or the Specialization in Music Composition;</u> or written permission of the Department of Music. A course designed to develop the musical ear through <u>early</u> intermediate-level sight-singing, dictation, aural analysis, and keyboard skills.  <i>NOTE: Students who have received credit for this topic under INMS 209, 499, or MUSI 210 may not take this course for credit.</i></p>
<p><b>Rationale:</b> The first-year level of Aural Perception, MUSI 211 and 212, is characterized as an intermediate-level course. The description change clarifies the level focus of the two courses. The deleted text referred to a teaching mode no longer utilized in this course.</p>	
<p><b>Resource Implications:</b> None</p>	
<p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 212**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA **Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MUSI 212      <i>Aural Perception II (3 credits)</i></b>            Prerequisite: MUSI 211. A continuation of the development of the musical ear through intermediate-level sight-singing, dictation, aural analysis, and keyboard skills. <del>The study of aural perception is done through a combination of classroom lectures and workshops.</del>  <i>NOTE: Students who have received credit for this topic under INMS 210 or 310 may not take this course for credit.</i></p>	<p><b>MUSI 212      <i>Aural Perception II (3 credits)</i></b>            Prerequisite: MUSI 211 <u>or written permission of the Department of Music.</u> A continuation of the development of the musical ear through <u>more complex</u> intermediate-level sight-singing, dictation, aural analysis, and keyboard skills.  <i>NOTE: Students who have received credit for this topic under INMS 210 or 310 may not take this course for credit.</i></p>
<p><b>Rationale:</b> Written permission is available to non-Music students who qualify for the course. Further text changes clarify the level of the course. The deleted text referred to a teaching mode no longer utilized in this course.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 241**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA **Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number                       Course Title                       Credit Value                       Prerequisite                       Course Description  
 Editorial                       Other - Specify: \_\_\_\_\_                       New Course                       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>MUSI 241      <i>Functional Keyboard Skills (3 credits)</i></b>  Prerequisite: Enrolment in the Major or Minor in Music, or written permission of the Department. Open to all students whose principal instrument is not piano. Registration priority is given to students enrolled in the BFA Major in Music. A workshop/laboratory that aims to develop and solidify fundamental and functional piano skills.</p>	<p><b>MUSI 241      <i>Functional Keyboard Skills (3 credits)</i></b>  Prerequisite: Enrolment in the Major or Minor in Music <u>or the Specialization in Music Performance or the Specialization in Music Composition;</u> or written permission of the Department. Open to all students whose principal instrument is not piano. Registration priority is given to students enrolled in the BFA Major in Music <u>or Specialization programs in the Department of Music.</u> A workshop/laboratory that aims to develop and solidify fundamental and functional piano skills.</p>
<p><b>Rationale:</b> Registration priority is being explicitly extended to the Specialization in Music Composition and the Specialization in Music Performance because keyboard skills are essential to composers and to non-keyboard performers. Students beyond these areas are welcome, with written permission, if there is room in the class, in this order of priority: students in the Minor in Music; students in other programs of the Department of Music; musically eligible students in programs in the Faculty of Fine Arts; musically eligible students in programs of other Faculties of Concordia; and those of other Concordia student status such as exchange and visiting students, Senior Auditors, Independent Students.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 263**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year: 2019/2020**

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty: Fine Arts**

**Department: Music**

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA **Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<b>MUSI 263      <i>Songwriting I (3 credits)</i></b> Prerequisite: MUSI 211, 251. A course that allows students to explore and develop their skills through regular songwriting as well as critical analysis of existing songs.	<b>MUSI 263      <i>Songwriting I (3 credits)</i></b> Prerequisite: MUSI 211, 251 <u>previously or concurrently</u> . A course that allows students to explore and develop their skills through regular songwriting as well as critical analysis of existing songs.
<p><b>Rationale:</b> Due to course cycling, MUSI 263 may be offered during the same term as its prerequisite.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 298**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<b>MUSI 298      <i>Special Topics in Music (3 credits)</i></b> Prerequisite: <del>W</del> ritten permission of the Department of Music. A study of a selected area not available in other courses in music.	<b>MUSI 298      <i>Special Topics in Music (3 credits)</i></b> Prerequisite: <a href="#">Enrolment in a Department of Music program</a> or written permission of the Department of Music. A study of a selected area not available in other courses in music.
<p><b>Rationale:</b> For a course at the 200 level students registered in Department of Music programs should be able to register directly without the need for written permission. Non-music students may seek written permission based on their eligibility and aptitude for the course in question.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)



**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 321**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information) **Calendar for Academic Year: 2019/2020**  
 Proposed  Undergraduate or  Graduate Curriculum Changes **Implementation Month/Year: September 2019**

**Faculty: Fine Arts** **Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music** **Degree: BFA** **Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number  Course Title  Credit Value  Prerequisite  Course Description  
 Editorial  Other - Specify: \_\_\_\_\_  New Course  Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>MUSI 321</b> <del><b>Art of Managing Your Career (3 credits)</b></del>  <del>A hands-on and practical course that gives growing</del> artists the business and promotional tools <del>that are a necessary part of today's artistic environment.</del>  <del>Registration in this course may require a short internship as part of the course requirements.</del>            NOTE: Students who have received credit for this topic under a MUSI 398 number may not take this course for credit.</p>	<p><b>MUSI 321</b> <b>Managing a Career in Music (3 credits)</b>  <u>This course introduces developing</u> artists <u>to</u> the business and promotional tools necessary for launching and navigating a career in music.            NOTE: Students who have received credit for this topic under a MUSI 398 number may not take this course for credit.</p>
<p><b>Rationale:</b> The changes are to bring the course up to date to more clearly reflect how it is offered. The Department of Music is working to develop an increasing number of internships not necessarily linked to specific courses; therefore, mention of "may require" a short internship is no longer appropriate in MUSI 321.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 353**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year: 2019/2020**  
**Implementation Month/Year: September 2019**

**Faculty: Fine Arts**

**Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music Degree: BFA Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>MUSI 353 Creative Counterpoint (3 credits)</b>            Prerequisite: MUSI 251, 252. This course explores fugal and contrapuntal techniques found in contemporary music, pop and indie music, film, theatre and game music, and in music of <b>other</b> cultures. This course may include elements of performance and/or improvisation.            NOTE: Students who have received credit for this topic or "Intermediate Counterpoint" under an INMS 398 number may not take this course for credit.</p>	<p><b>MUSI 353 Creative Counterpoint (3 credits)</b>            Prerequisite: MUSI <u>211, 212</u>, 251, 252. This course explores fugal and contrapuntal techniques found in contemporary music, pop and indie music, film, theatre and game music, and in music of <u>diverse</u> cultures. This course may include elements of performance and/or improvisation.            NOTE: Students who have received credit for this topic or "Intermediate Counterpoint" under an INMS 398 number may not take this course for credit.</p>
<p><b>Rationale:</b> The prerequisites should include the entire normal first year course sequence of ear training as well as theory. Outdated language is being changed.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 364**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information) **Calendar for Academic Year: 2019/2020**  
 Proposed  Undergraduate or  Graduate Curriculum Changes **Implementation Month/Year: September 2019**

**Faculty: Fine Arts** **Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music** **Degree: BFA** **Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MUSI 364</b>      <b>Acoustic Instrumentation and Orchestration</b> (3 credits)            Prerequisite: MUSI 211, 251, 252. This course covers the fundamental elements of writing for acoustic instruments and for the combination of acoustic instruments in various ensembles and in a variety of genres including classical, contemporary art music, pop, and indie.            NOTE: Students who have received credit for this topic or "Orchestration" under an INMS 398 number may not take this course for credit.</p>	<p><b>MUSI 364</b>      <b>Acoustic Instrumentation and Orchestration</b> (3 credits)            Prerequisite: MUSI 211, <u>212</u>, 251, 252. This course covers the fundamental elements of writing for acoustic instruments and for the combination of acoustic instruments in various ensembles and in a variety of genres including classical, contemporary art music, pop, and indie.            NOTE: Students who have received credit for this topic or "Orchestration" under an INMS 398 number may not take this course for credit.</p>
<p><b>Rationale:</b> The prerequisites should include the entire normal first year course sequence of ear training as well as theory.  <b>Resource Implications:</b> None  <b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**

**COURSE NUMBER: MUSI 365**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Specialization in Music Performance, Specialization in Music Composition, Major in Music **Degree:** BFA **Section Title:** 81.10

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<b>MUSI 365</b> <b>Electronic Instrumentation and Orchestration</b> (3 credits) Prerequisite: MUSI 211, 251, 252. This course covers the fundamental elements of writing for electronic and amplified instruments and for the combination of these instruments in various ensembles and in a variety of pitch-based genres including contemporary art music, pop and indie.	<b>MUSI 365</b> <b>Electronic Instrumentation and Orchestration</b> (3 credits) Prerequisite: MUSI 211, <u>212</u> , 251, 252. This course covers the fundamental elements of writing for electronic and amplified instruments and for the combination of these instruments in various ensembles and in a variety of pitch-based genres including contemporary art music, pop and indie.
<p><b>Rationale:</b> The prerequisites should include the entire normal first year course sequence of aural perception as well as theory.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-17**  
**COURSE NUMBER: MUSI 398**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information) **Calendar for Academic Year: 2019/2020**  
 Proposed  Undergraduate or  Graduate Curriculum Changes **Implementation Month/Year: September 2019**

**Faculty: Fine Arts** **Department: Music**

**Program: Specialization in Music Performance, Specialization in Music Composition, Major in Music** **Degree: BFA** **Section Title: 81.10**

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>MUSI 398</b>      <b>Special Topics in Music</b> (3 credits)            Prerequisite: <del>w</del>ritten permission of the Department of Music. A seminar/workshop in an area of music <del>which</del> provides an opportunity for the study of specialized aspects of music outside the scope of existing courses.</p>	<p><b>MUSI 398</b>      <b>Special Topics in Music</b> (3 credits)            Prerequisite: <u>Enrolment in a Department of Music program or</u> <del>w</del>ritten permission of the Department of Music. A seminar/workshop in an area of music <u>that</u> provides an opportunity for the study of specialized aspects of music outside the scope of existing courses.</p>
<p><b>Rationale:</b> Students in programs in the Department of Music should be able to register for MUSI Special Topics without needing written permission. For non-music students, written permission is appropriate. The editorial edit ("that" for "which") is a fine point of English syntax/punctuation; the red strike-out in the original indicates the error.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)





**MEMO TO:** Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning

**FROM:** Brad Nelson, Associate Dean, Academic Programs and Development  
School of Graduate Studies

**DATE:** April 23, 2018

**SUBJECT: GRADUATE CURRICULUM CHANGES (COMP-90)  
(CALENDAR – 2018/2019)  
DEPARTMENT OF COMPUTER SCIENCE AND SOFTWARE  
ENGINEERING  
FACULTY OF ENGINEERING AND COMPUTER SCIENCE**

The Graduate Curriculum Committee (GCC) reviewed the curriculum changes approved by the Faculty of Engineering and Computer Science.

The Department of Computer Science and Software Engineering wishes to create two new courses.

The GCC approved this document with no changes. I therefore recommend that the Council of the School of Graduate Studies approve and recommend to Senate the above-mentioned curriculum changes in their final form.



cc: M. Debbabi, Associate Dean, Graduate Programs and Research, Faculty of Engineering and Computer Science  
O. Ward, University Curriculum Administrator, Office of the Provost and Vice-President, Academic Affairs

## INTERNAL MEMORANDUM

**TO:** Dr. Bradley Nelson  
Chair, Graduate Curriculum Committee  
School of Graduate Studies

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**CC:** Ms. Frederica Martin  
Academic Programs Analyst  
School of Graduate Studies

**DATE:** April 13, 2018

**RE:** *Graduate Curriculum Proposal for the 2018-19 Academic Year  
Faculty of Engineering and Computer Science*

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At its meeting on April 13th, 2018, the Council of the Faculty of Engineering and Computer Science reviewed and approved, with some corrections, the proposed changes from the Department of Computer Science and Software Engineering to the degree requirements of its thesis-based Master's programs (MCompSc and MASc in SOEN), as well as the creation of the following two new permanent courses:

1. *COMP 6341 Computer Vision (\*)*
2. *SOEN 6021 Software Re-engineering*

*COMP 6341 Computer Vision* has been offered over the last two years as a slot course with an average combined enrolment of about 30 (20 graduates and 10 undergraduates) students with a class capacity of 30 seats every time. A lab instructor will be hired by the Department and the cost will be covered by the ENCS Faculty. Also *SOEN 6021 Software Re-engineering* has been offered as a slot course with an average enrolment of about 45 students with a class capacity of 60 seats. There are no resource implications for this course as it will be part of a faculty member's teaching load and drawn from our current course allotment.

Both courses are essential in enhancing image processing and software systems respectively that will keep pace with the ever-changing industry needs and trends. Details of the curriculum items are indicated and explained in the Department's internal memorandum and in the COMP-90 dossier.

We kindly request that this dossier be placed on the next agenda of the Graduate Curriculum Committee.

Thank you for your consideration of this proposal.



FACULTY OF ENGINEERING  
AND COMPUTER SCIENCE

Office of the Dean

## INTERNAL MEMORANDUM

**TO:** Dr. Amir Asif  
Chair of the Faculty Council  
Faculty of Engineering and Computer Science

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**DATE:** March 28, 2018

**RE:** **Graduate Curriculum Proposal for the 2018-19 Academic Year**  
**Department of Computer Science and Software Engineering (CSE)**

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At its meeting on March 27, 2018, the Engineering and Computer Science Graduate Studies Committee (ECSGSC) reviewed and approved, with minor modifications, the changes proposed by the CSE Department to the degree requirements of MCompSc and MASc in SOEN, as well as the creation of two new permanent courses:

1. *COMP 6341 Computer Vision (\*)*
2. *SOEN 6021 Software Re-engineering*

*COMP 6341 Computer Vision* has been offered as a slot course with an average combined enrolment of about 30 (20 graduates and 10 undergraduates) students with a class capacity of 30 seats. Also *SOEN 6021 Software Re-engineering* has been offered as a slot course with an average enrolment of about 45 students with a class capacity of 60 seats. A lab instructor will be hired by the Department and the cost will be covered by the ENCS Faculty. Also *SOEN 6021 Software Re-engineering* has been offered as a slot course with an average enrolment of about 45 students with a class capacity of 60 seats. Both courses are essential in enhancing image processing and software systems respectively that will keep pace with ever-changing industry needs and trends.

Details of the curriculum items are indicated and explained in the Department's internal memorandum and in the COMP-90 dossier.

We kindly request that this item be placed on the next agenda of the Faculty Council for approval.

Thank you for your consideration of this proposal.

I N T E R N A L M E M O R A N D U M

TO: Mourad Debbabi, Associate Dean, Graduate Programs and Research, Faculty of Engineering and Computer Science

FROM: Dr. S. Mudur, Chair Department of Computer Science and Software Engineering

DATE: Monday, February 26, 2018

SUBJECT: Proposed Graduate Calendar updates and slot course promotions

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Please find attached the Graduate Curriculum Dossier (COMP-90).

CSE would like to propose the following updates for the coming year:

- We would like to promote a pair of existing graduate level slot courses to permanent offerings for next year.
  - Computer Vision (cross-listed with the undergraduate course COMP 425)
  - Software Re-engineering (graduate)
- We would like to update the Graduate section of the CSE Calendar in order to bring the text in line with current course offerings.

These changes have been approved by the COMP and SOEN Curriculum Committees, as well as the Department Council, as of February 12, 2018.

We would be grateful if you could put this on the agenda of the next Engineering and Computer Science Graduate Studies Curriculum Committee meeting.

**DOSSIER TITLE: COMP-90**

**DESCRIPTION OF CHANGE: Graduate Program text update** (Changes to the requirements for the degree)

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Faculty: ENCS

Calendar for Academic Year: 2018/2019

Implementation Month/Year: January 2019

Department: Computer Science and Software Engineering

Program: Software Engineering

Degree: MASc (SOEN)

Section Title: Summer 2018

Type of Change: (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

Editorial  Requirements  Regulations

New Program  Program Deletion

<b>Present Text</b> (Text from 2018 – 2019 Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>Master of/Magisteriate in Applied Science (Software Engineering)</b></p> <p><b>Requirements for the Degree</b></p> <p>Students must complete a minimum of 45 credits as shown below:</p> <ol style="list-style-type: none"><li><b>Courses.</b> Students must complete a minimum of 16 credits of course work. A minimum of 8 credits must be chosen from Topic Areas C08 (<del>Developments in Software Engineering</del>) and C09 (<del>Software Engineering</del>). Any remaining credits may be chosen from any of the Topic Areas C01 through <del>C09 and C12 (Cognate Disciplines)</del>. A maximum of 4 credits can be chosen from computer science courses at the 6000 level marked with (*). The student's study program must be approved by the supervisor(s) and either the Graduate Program Director or the Department Chair.</li></ol>	<p><b>Master of/Magisteriate in Applied Science (Software Engineering)</b></p> <p><b>Requirements for the Degree</b></p> <p>Students must complete a minimum of 45 credits as shown below:</p> <ol style="list-style-type: none"><li><b>Courses.</b> Students must complete a minimum of 16 credits of course work. A minimum of 8 credits must be chosen from Topic Areas C08 <u>through C13</u>. Any remaining credits may be chosen from any of the Topic Areas C01 through <u>C07, and C16</u>. A maximum of 4 credits can be chosen from computer science courses at the 6000 level marked with (*). The student's study program must be approved by the supervisor(s) and either the Graduate Program Director or the Department Chair.</li></ol>
<p><b>Rationale:</b> This is a simple editorial change that provides consistency in the wording for the Master of Applied Science (SOEN) program with the MENG (SOEN) program. Changes in the topic areas give students more flexibility to choose their courses from a variety of specialization choices.</p> <p><b>Resource Implications:</b> None</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: COMP-90**

**DESCRIPTION OF CHANGE:** (Changes to the requirements in the MAsC and MCOMPSC degrees)

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (Changes to the requirements for the degree)

Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019  
**Implementation Month/Year:** January 2019

**Faculty:** ENCS

**Department:** Computer Science and Software Engineering

**Program:** Computer Science

**Degree:** MCompSc

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Editorial                       Requirements                       Regulations  
 New Program                       Program Deletion

<b>Present Text</b> (Text from 2018- 2019 Calendar)	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>Master of/Magisteriate in Computer Science (MCompSc)</b></p> <p><b>Requirements for the Degree</b></p> <p>Students must complete a minimum of 45 credits as shown below:</p> <ol style="list-style-type: none"> <li><b>Courses.</b> Students must complete a minimum of 16 credits of course work. A minimum of 8 credits must be chosen from Topic Areas C01 through C07. Any remaining credits may be chosen from Topic Areas C08 (<del>Developments in Software Engineering</del>), C09 (<del>Software Engineering</del>), C12 (<del>Cognate Disciplines</del>), and COMP 6961. A maximum of 4 credits can be chosen from computer science courses at the 6000 level marked with (*). The student’s study program must be approved by the supervisor(s) and either the Graduate Program Director or the Department Chair.</li> </ol>	<p><b>Master of/Magisteriate in Computer Science (MCompSc)</b></p> <p><b>Requirements for the Degree</b></p> <p>Students must complete a minimum of 45 credits as shown below:</p> <ol style="list-style-type: none"> <li><b>Courses.</b> Students must complete a minimum of 16 credits of course work. A minimum of 8 credits must be chosen from Topic Areas C01 through C07. Any remaining credits may be chosen from Topic Areas C08 <u>through C13, and C16</u>, and COMP 6961. A maximum of 4 credits can be chosen from computer science courses at the 6000 level marked with (*). The student’s study program must be approved by the supervisor(s) and either the Graduate Program Director or the Department Chair.</li> </ol>
<p><b>Rationale:</b> This is a simple editorial change that provides consistency in the wording of the MCompSc program with the MApCompSc program. Changes in the topic areas give students more flexibility to choose their courses from a variety of specialization choices.</p> <p><b>Resource Implications:</b> None</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: COMP-90**

**DESCRIPTION OF CHANGE: Topic Areas C03 and C12**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (Changes to the requirements for the degree)

Proposed [ ] Undergraduate or [ X ] Graduate Curriculum Changes

Calendar for Academic Year: 2018/2019

Implementation Month/Year: January 2019

Faculty: ENCS

Department: Computer Science and Software Engineering

Program: Computer Science

Degree: MCompSc

Section Title: Summer 2018

Type of Change: (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

[ ] Editorial [ X ] Requirements [ ] Regulations  
[ ] New Program [ ] Program Deletion

Present Text (Text from 2018- 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>C12 - SOFTWARE DEVELOPMENT PROCESSES AND MANAGEMENT</b>            SOEN 6011 Software Engineering Processes            SOEN 6841 Software Project Management</p> <p><b>C03 - IMAGE PROCESSING/PATTERN RECOGNITION AND GRAPHICS</b>            COMP 6311 Computer Animation (*)            COMP 6321 Machine Learning            COMP 6711 Computational Geometry            COMP 6731 Pattern Recognition (*)            COMP 6761 Advanced 3D Graphics for Game Programming            COMP 6771 Image Processing (*)            COMP 7661 Advanced Rendering and Animation            COMP 7751 Advanced Pattern Recognition            COMP 7781 Advanced Image Processing</p>	<p><b>C12 - SOFTWARE DEVELOPMENT PROCESSES AND MANAGEMENT</b>            SOEN 6011 Software Engineering Processes  <a href="#">SOEN 6021 Software Re-engineering</a>            SOEN 6841 Software Project Management</p> <p><b>C03 - IMAGE PROCESSING/PATTERN RECOGNITION AND GRAPHICS</b>            COMP 6311 Computer Animation (*)            COMP 6321 Machine Learning  <a href="#">COMP 6341 Computer Vision (*)</a>            COMP 6711 Computational Geometry            COMP 6731 Pattern Recognition (*)            COMP 6761 Advanced 3D Graphics for Game Programming            COMP 6771 Image Processing (*)            COMP 7661 Advanced Rendering and Animation            COMP 7751 Advanced Pattern Recognition            COMP 7781 Advanced Image Processing</p>
<p><b>Rationale:</b>            The changes reflect the addition of two new courses.</p> <p><b>Resource Implications:</b> None</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: COMP-90**  
**COURSE NUMBER: COMP 6341**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019  
**Implementation Month/Year:** January 2019

**Faculty:** ENCS **Department:** Computer Science and Software Engineering

**Program:** Computer Science **Degree:** MEng (SOEN), MAsC (SOEN), PhD, MApCompSc, MCompSc **Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text</b> (Text from 20xx - 20xx Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>COMP 6341 Computer Vision (*)</b> (4 credits)            This course introduces basic techniques and concepts in computer vision including image formation, grouping and fitting, geometric vision, recognition, perceptual organization, and the state-of-the art software tools. Students learn fundamental algorithms and techniques, and gain experience in programming vision-based components; in particular, how to program in OpenCV, a powerful software interface used to process data captured from passive and active sensors. A project is required. Laboratory: two hours per week.  <b>Note:</b> Students who have received credit for COMP 691 (Computer Vision) may not take this course for credit.</p>
<p><b>Rationale:</b>            This course has been offered as a slot course three times and we would like to add this course to our permanent schedule. The course appears to be popular with students – after an initial offering with 15 students the course has been at its capacity of 30 students for the past two cycles, including the current semester. This course is essential for image processing.            The course will be cross-listed with COMP 425 (see COMP-91 dossier). The material covered in this course is the same for undergraduates and graduates. The difference is in the requirements for the assignments/project. The graduate students have more questions/tasks to answer/implement than the undergraduates. For example in one of the assignments, the undergraduates had the option to implement any of the last five questions for extra credit. For the graduates, the first two questions were compulsory and the remaining three questions were for extra credit. It should be noted that generally the difficulty level is much higher for the compulsory graduate questions.</p> <p><b>Resource Implications:</b> A lab instructor will be hired by the department which the Department/Faculty has approved. The course will be part of the faculty member's regular teaching load.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: COMP-90**  
**COURSE NUMBER: SOEN 6021**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019  
**Implementation Month/Year:** January 2019

**Faculty:** ENCS **Department:** Computer Science and Software Engineering

**Program:** Computer Science **Degree:** MEng (SOEN), MAsc (SOEN), PhD, MApCompSc, MCompSc **Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 20xx – 20xx Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>SOEN 6021 Software Re-engineering (4 credits)</b>            Prerequisite: SOEN 6461 or permission of the instructor.            This course introduces software re-engineering, software architecture recovery and reconstruction, and reflexion models. Students use development history to support re-engineering, and are exposed to the latest empirical studies on software re-engineering and software metrics applied to software re-engineering. Also, students learn how to apply various software re-engineering patterns and software migration strategies. A project is required.  <b>Note:</b> Students who have received credit for SOEN 691 (Software Re-engineering) may not take this course for credit.</p>
<p><b>Rationale:</b></p> <p>This course has been offered as a slot course twice and we would like to add this course to our permanent schedule. The course appears to be popular with students – it has been offered at the standard capacity of 30 students during the first two iterations and was increased to 45 students this semester due to student demand. This course is fundamental in facilitating a continuous change of software systems and it is needed by both computer science and software engineering students.</p> <p><b>Resource Implications:</b> The course will be part of a faculty member's teaching load and drawn from our current course allotment.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**MEMO TO:** Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning

**FROM:** Brad Nelson, Associate Dean, Academic Programs and Development  
School of Graduate Studies

**DATE:** April 23, 2018

**SUBJECT: GRADUATE CURRICULUM CHANGES (ELEC-98)  
(CALENDAR - 2018-2019)  
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING  
FACULTY OF ENGINEERING AND COMPUTER SCIENCE**

The Graduate Curriculum Committee (GCC) reviewed the curriculum changes approved by the Faculty of Engineering and Computer Science.

The Department of Electrical and Computer Engineering is updating one course title and description, as well as adding a prerequisite to another course and updating the course content.

The GCC approves the proposed curriculum changes with minor edits. I therefore recommend that the Academic Programs Committee approve and recommend to Senate the above-mentioned curriculum changes in their final form.



cc: M. Debbabi, Associate Dean, Graduate Programs and Research, Faculty of Engineering and Computer Science  
O. Ward, University Curriculum Administrator, Office of the Provost and Vice-President, Academic Affairs

## **INTERNAL MEMORANDUM**

**TO:** Dr. Bradley Nelson  
Chair, Graduate Curriculum Committee  
School of Graduate Studies

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**CC:** Ms. Frederica Martin  
Academic Programs Analyst  
School of Graduate Studies

**DATE:** March 26, 2018

**RE:** **Graduate Curriculum Proposal for the 2018-19 Academic Year**  
**Faculty of Engineering and Computer Science**

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At its meeting on March 9th, 2018, the Council of the Faculty of Engineering and Computer Science reviewed and approved, with some corrections to the graduate curriculum items proposed by the Department of Electrical and Computer Engineering (ECE). Namely, an up-to-date course title and description of *ELEC 6481 Computer-Aided Analysis of Power Electronic Systems*, as well as the addition of the prerequisite ELEC 6601 to *ELEC 6831 Digital Communications* as students need to have sufficient background in signal processing.

Details of the graduate curriculum items are indicated and explained in the Department's internal memorandum and in the dossier ELEC-98.

We kindly request that this dossier be placed on the next agenda of the Graduate Curriculum Committee.

Thank you for your consideration of this proposal.



FACULTY OF ENGINEERING  
AND COMPUTER SCIENCE

Office of the Dean

## INTERNAL MEMORANDUM

**TO:** Dr. Amir Asif  
Chair of the Faculty Council  
Faculty of Engineering and Computer Science

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**DATE:** February 22, 2018

**RE:** *Graduate Curriculum Proposal for the 2018-19 Academic Year*  
**Department of Electrical and Computer Engineering (ECE)**

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At its meeting on February 21, 2018, the Engineering and Computer Science Graduate Studies Committee (ECGSC) reviewed and approved, with minor modifications, the revisions of *ELEC 6481 Computer-Aided Analysis of Power Electronic Systems* and *ELEC 6831 Digital Communications* proposed by the ECE Department. The Department proposed to update the course title of ELEC 6481 to **Computer-Aided Analysis and Design of Electric Machines**, as well as the course content to include machine design to reflect recent industry trends and research. The Department also proposed the addition of *ELEC 6601 Digital Signal Processing* as the prerequisite for ELEC 6831 since students are required to have sufficient background in signal processing.

Details of the graduate curriculum items are indicated and explained in the Department's internal memorandum and in the forms (ELEC-98 dossier).

We kindly request that this item be placed on the next agenda of the Faculty Council for approval.

Thank you for your consideration of this proposal.

**DATE:** Feb 9, 2018

**TO:** Dr. M. Debbabi, Associate Dean, Research and Graduate Studies  
Faculty of Engineering and Computer Science

**FROM:** Dr. W.E. Lynch, Chair  
Department of Electrical and Computer Engineering

**SUBJECT:** **Graduate Curriculum – Update for Winter 2019**

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Please find enclosed the package submitted by the Department of Electrical and Computer Engineering.

**ELEC 6481 Computer-Aided Analysis of Power Electronic Systems**

The title and description of this course were proposed by the Department to change to **Computer-Aided Analysis and Design of Electric Machines**. The focus of the change is that the course content has not been taught for many years. There is a demand for a machine design course at the graduate level to support many research projects.

**ELEC 6831 Digital Communications**

The Department proposed to add a prerequisite to **Digital Communications**. The focus of the change is that there was no prerequisite and this course was in need of ELEC 6601 Digital Signal Processing since the knowledge was required to enhance course understanding and success.

The graduate changes were approved at the Department Curriculum Committee meeting held on September 8, 2017, January 15, 2018, and at the Department Council meetings held on September 18, 2017, and January 26, 2018

I would be grateful if you could put this on the agenda of the next ENCS Graduate Studies Committee meeting.

**DOSSIER TITLE: ELEC-98**

**DESCRIPTION OF CHANGE: A change in the topic area E45**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2018/2019  
Implementation Month/Year: January 2019

**Faculty: Engineering and Computer Science**

**Department:** Electrical and Computer Engineering

**Program:** Electrical and Computer Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

Editorial                       Requirements                       Regulations  
 New Program                       Program Deletion

<b>Present Text</b> (Text from 2017 – 2018 Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>List of Courses by Topic Areas</b></p> <p><b>E45 - ELECTRICAL POWER ENGINEERING</b></p> <p>ELEC 6411 Power Electronics I (*) ELEC 6421 Renewable Energy Systems (*) ELEC 6431 Advanced Electrical Machines and Drives ELEC 6461 Power Electronics II ELEC 6471 Hybrid Electric Vehicle Power System Design and Control (*) ELEC 6481 Computer-aided Analysis <del>of Power Electronic Systems</del> ELEC 6491 Controlled Electric Drives ELEC 7441 Design of Power Electronic Circuits ELEC 7451 Power System Compensation</p>	<p><b>List of Courses by Topic Areas</b></p> <p><b>E45 - ELECTRICAL POWER ENGINEERING</b></p> <p>ELEC 6411 Power Electronics I (*) ELEC 6421 Renewable Energy Systems (*) ELEC 6431 Advanced Electrical Machines and Drives ELEC 6461 Power Electronics II ELEC 6471 Hybrid Electric Vehicle Power System Design and Control (*) ELEC 6481 Computer-<u>A</u>ided Analysis <u>and Design of Electric Machines</u> ELEC 6491 Controlled Electric Drives ELEC 7441 Design of Power Electronic Circuits ELEC 7451 Power System Compensation</p>
<p><b>Rationale:</b> A change is reflected in the course title of ELEC 6481. For a more detailed rationale, please see the course form.</p> <p><b>Resource Implications:</b> None.</p>	

Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: ELEC-98**  
**COURSE NUMBER: ELEC 6481**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019  
**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program:** Electrical and Computer Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Winter 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

Present Text (Text from 2017 – 2018 Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>ELEC 6481 Computer-aided Analysis of Power Electronic Systems (4 credits)</b></p> <p>Prerequisite: ELEC 6411.</p> <p><del>Algorithms for the systematic formulation of equations for power electronic converters containing passive and active elements, and semiconductor switches. Modelling of semiconductor switching devices. Description of general-purpose simulation packages. Modelling of static power converters; average modelling. Simulation of power and control circuits. Design of controllers. Case studies of common converters.</del> A project is required.</p>	<p><b>ELEC 6481 Computer-Aided Analysis and Design of Electric Machines (4 credits)</b></p> <p>Prerequisite: ELEC 6411.</p> <p><u>This course uses machine design software to aid in the analysis and design of electrical machines, which is offered in a computer-aided design (CAD) environment. The emphasis is on the design of electrical machines for renewable energy and electric vehicle applications. Emphasis is placed on permanent-magnet and switched reluctance machines, although machines of importance, like the induction machine, are also discussed. Magnetic equivalent circuits for a magnet and a typical machine radial field geometry are developed which lead naturally to sizing equations. Other geometries and Eddy current and hysteresis core loss models are presented. The torque angle curves of the switched reluctance machine are developed, which lead to design concepts. The synchronous reluctance machine is introduced.</u> A project is required.</p>
<p><b>Rationale:</b> The original course content was modified to include electrical machine design to support many research projects and graduate students in this area. The updated contents was last taught in Fall 2015 and was well received by students.</p>	
<p><b>Resource Implications:</b> Free electric machine design software by Infolytica was used when the course was taught in 2015. The same free software will be used in the future. The course will be part of a faculty member's teaching load and drawn from our current course allotment.</p>	
<p><b>Other Programs within which course is listed:</b> None</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: ELEC-98**  
**COURSE NUMBER: ELEC 6831**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

Proposed [ ] Undergraduate or [ x ] Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019  
**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program:** Electrical and Computer Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

[ ] Course Number      [ ] Course Title      [ ] Credit Value      [x ] Prerequisite      [ x ] Course Description  
 [ ] Editorial      [ ] Other - Specify: \_\_\_\_\_      [ ] New Course      [ ] Course Deletion

<b>Present Text</b> (Text from 2017/2018 Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>ELEC 6831 Digital Communications</b> (4 credits)</p> <p>Random processes and linear systems; baseband modulation/demodulation, optimal receivers in AWGN, correlation and matched-filter receivers, pulse shaping for band-limited channels; bandpass modulation techniques such as PAM, PSK, DPSK, FSK, QAM. <del>Introduction to</del> synchronization, timing and carrier recovery; error control coding; Linear block codes; syndrome-based decoding. A project is required.</p>	<p><b>ELEC 6831 Digital Communications</b> (4 credits)</p> <p><u>Prerequisite: ELEC 6601</u></p> <p><u>Topics include</u> random processes and linear systems; baseband modulation/demodulation, optimal receivers in AWGN, correlation and matched-filter receivers, pulse shaping for band-limited channels; bandpass modulation techniques such as PAM, PSK, DPSK, FSK, QAM; synchronization, timing and carrier recovery, <u>maximum-likelihood carrier phase and symbol timing estimation</u>; error control coding, linear block codes, syndrome-based decoding, <u>system bit error rate and coding gain</u>. A project is required.</p>
<p><b>Rationale:</b> ELEC6601 (Digital Signal Processing) is added as a prerequisite since this knowledge is required to enhance course understanding and success. Moreover, the description of the course is given in more detail.</p>	
<p><b>Resource Implications:</b> None</p>	
<p><b>Other Programs within which course is listed:</b> None</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)



**MEMO TO:** Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning

**FROM:** Brad Nelson, Associate Dean, Academic Programs and Development  
School of Graduate Studies

**DATE:** April 23, 2018

**SUBJECT: GRADUATE CURRICULUM CHANGES (ELEC-101)  
(CALENDAR – 2018-2019)  
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING  
FACULTY OF ENGINEERING AND COMPUTER SCIENCE**

The Graduate Curriculum Committee (GCC) reviewed the curriculum changes approved by the Faculty of Engineering and Computer Science.

The Department of Electrical and Computer Engineering is proposing the creation of a new course.

The GCC approves the proposed curriculum changes with minor edits. I therefore recommend that the Academic Programs Committee approve and recommend to Senate the above-mentioned curriculum changes in their final form.



cc: M. Debbabi, Associate Dean, Graduate Programs and Research, Faculty of Engineering and Computer Science  
O. Ward, University Curriculum Administrator, Office of the Provost and Vice-President, Academic Affairs

**INTERNAL MEMORANDUM**

**TO:** Dr. Bradley Nelson  
Chair, Graduate Curriculum Committee  
School of Graduate Studies

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**CC:** Ms. Frederica Martin  
Academic Programs Analyst  
School of Graduate Studies

**DATE:** April 13, 2018

**RE:** **Graduate Curriculum Proposal for the 2018-19 Academic Year  
Faculty of Engineering and Computer Science**

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At its meeting on April 13th, 2018, the Council of the Faculty of Engineering and Computer Science reviewed and approved, with some corrections, the creation of a new course *ELEC 6671 Biological Signal Processing* proposed by the Department of Electrical and Computer Engineering (ECE). This course has been offered twice as a slot course with a combined enrolment of about 30 (undergraduate and graduate) students with a class capacity of 50 seats. This course is essential to medical imaging technology. In terms of resource implications, the course will be part of a faculty member's teaching load and drawn from the Department's current course allotment. The course is expected to enhance the department's course offerings in medicine and engineering.

Details of the new program proposal are indicated and explained in the Department's internal memorandum in the dossier ELEC-101.

We kindly request that this dossier be placed on the next agenda of the Graduate Curriculum Committee.

Thank you for your consideration of this proposal.

**INTERNAL MEMORANDUM**

**TO:** Dr. Amir Asif  
Chair of the Faculty Council  
Faculty of Engineering and Computer Science

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**DATE:** March 28, 2018

**RE:** **Graduate Curriculum Proposal for the 2018-19 Academic Year  
Department of Electrical and Computer Engineering (ECE)**

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At its meeting on March 27, 2018, the Engineering and Computer Science Graduate Studies Committee (ECSGSC) reviewed and approved, with minor modifications, the creation of a new course *ELEC 6671 Biological Signal Processing*. This course has been offered twice as a slot course with a combined enrolment of about 30 students. In terms of resource implications, the course will be part of a faculty member's teaching load and drawn from the Department's current course allotment. This course is essential to medical imaging technology. In addition, it enhances the department's course offerings in medicine and engineering.

Details of the curriculum item are indicated and explained in the Department's internal memorandum and in the ELEC-101 dossier.

We kindly request that this item be placed on the next agenda of the Faculty Council for approval.

Thank you for your consideration of this proposal.

**DATE:** March 26, 2018

**TO:** Dr. M. Debbabi, Associate Dean, Research and Graduate Studies  
Faculty of Engineering and Computer Science

**FROM:** Dr. W.E. Lynch, Chair  
Department of Electrical and Computer Engineering

**SUBJECT:** **Graduate Changes – January 2019**

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Please find enclosed Dossier #101 submitted by the Department of Electrical and Computer Engineering.

The Dept. of Electrical & Computer Engineering is offering a new course to update the program. The package consists of one new course **ELEC 6671** to be listed in the Topic Area **E47 Signal Processing** respectively.

**ELEC 6671 Biological Signal Processing**

This goal of this course is to provide students will biological modeling and signal processing concepts through assessment of brain function with simultaneous collection of electroencephalogram (EEG), functional MRI data, optical imaging and Ultrason. Topics include signal modeling, multivariate analyses and computational model at the mesoscopic scale embedding the recent knowledge on the physiology as demonstrated on real-world biological signals. This course would go under topic area E47. In terms of resource implications, the course will be part of a faculty member's teaching load and drawn from our current course allotment.

The graduate changes have been approved at the Department Curriculum Committee meeting held on February 5, 2018 and at the Department Council meeting held on February 12, 2018.

I would be grateful if you could put this on the agenda of the next ENCS Graduate Studies Committee meeting.

**DOSSIER TITLE: ELEC-101**

**DESCRIPTION OF CHANGE: Topic Area E47**

**PROGRAM CHANGE - CALENDAR UPDATE FORM -**

Proposed [ ] Undergraduate or [ x ] Graduate Curriculum Changes

Calendar for Academic Year: 2018/2019

Implementation Month/Year: January 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program:** Electrical and Computer Engineering

**Degree:** MEng, MASC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- [ ] Editorial                      [ x ] Requirements                      [ ] Regulations  
[ ] New Program                      [ ] Program Deletion

<b>Present Text</b> (Text from 20__ - 20__ Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<u>List of Courses by Topic Areas</u> <b>E47 - SIGNAL PROCESSING</b>  ELEC 6601 Digital Signal Processing ELEC 6611 Digital Filters ELEC 6621 Digital Waveform Compression ELEC 6631 Video Processing and Compression ELEC 6641 Two-dimensional Signal and Image Processing ELEC 6651 Adaptive Signal Processing ELEC 6661 Medical Image Processing (*)	<u>List of Courses by Topic Areas</u> <b>E47 - SIGNAL PROCESSING</b>  ELEC 6601 Digital Signal Processing ELEC 6611 Digital Filters ELEC 6621 Digital Waveform Compression ELEC 6631 Video Processing and Compression ELEC 6641 Two-dimensional Signal and Image Processing ELEC 6651 Adaptive Signal Processing ELEC 6661 Medical Image Processing (*) <a href="#">ELEC 6671 Biological Signal Processing (*)</a>
<b>Rationale:</b> The topic area reflects the addition of the new course.	
<b>Resource Implications:</b> None	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE – ELEC-101**  
**COURSE NUMBER: ELEC 6671**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019  
**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Electrical and Computer Engineering

**Program:** Electrical and Computer Engineering

**Degree:** MEng, MASC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

Course Number  
 Editorial

Course Title  
 Other - Specify: \_\_\_\_\_

Credit Value

Prerequisite  
 New Course

Course Description  
 Course Deletion

Present Text (Text from 20xx – 20xx Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>ELEC 6671 Biological Signal Processing</b> (*) (4 credits)            Prerequisite: ELEC 6601.            This course covers signal processing through discussion of current bioengineering activities which rely on signal processing and include assessment of neural function with simultaneous collection of electroencephalogram (EEG) and functional MRI data; the non-invasive assessment of cardiac autonomic regulation using electrocardiography; assessment of neural function using near-infrared spectroscopy (NIRS); assessment of muscle activity using electromyography (EMG). Topics include modern spectral analysis, time-frequency analysis (short-time Fourier transforms and wavelets); signal modelling; multivariate analyses and adaptive filtering. A project is required.  <b>Note:</b> Students who have received credit for ELEC 691 (Biological Signal Processing) may not take this course for credit.</p>
<p><b>Rationale:</b> Our students learn about techniques from classical frequency analysis and filtering, but don't receive a comprehensive view of the use of these techniques in medical imaging applications. They also learn about image acquisition techniques, image processing and image interpretation. The proposed course focuses on anatomo-functional brain imaging. The course briefly reviews the classical multivariate analysis and filtering topics covered in ELEC 6601. It overlaps with the topic of least-mean square filters and is included because of its importance in the applied brain imaging topics discussed and its sequential relationship with other presented topics, e.g. regression analysis. The course content has been developed in collaboration with the Perform Centre. Students will use free software to process data.            This course has been offered as a slot course twice. It has been offered in Winter 2017 with 12 undergraduate and 19 graduate students, also in Winter 2018 with 19 undergraduate and 10 graduate students registered. The course capacity is 50 students. This course is appropriate to be listed under topic area E47 Signal Processing.             This course will be cross-listed with ELEC 445. The course work load for the graduate students will be different from that of the undergraduate students. That is, each graduate student will do an individual project, which he/she will have to present to the class while the undergraduate students will do a project in teams (two). Also, there will be some exam questions exclusively for the graduate students.</p> <p><b>Resource Implications:</b> The course will be part of a faculty member's teaching load and drawn from our current course allotment.</p>	

**Other Programs within which course is listed:** None



**MEMO TO:** Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning

**FROM:** Brad Nelson, Associate Dean, Academic Programs and Development  
School of Graduate Studies

**DATE:** April 23, 2018

**SUBJECT: GRADUATE CURRICULUM CHANGES (MECH-105)  
(CALENDAR – 2018-2019)  
DEPARTMENT OF MECHANICAL, INDUSTRIAL, AND AEROSPACE  
ENGINEERING  
FACULTY OF ENGINEERING AND COMPUTER SCIENCE**

The Graduate Curriculum Committee (GCC) reviewed the curriculum changes approved by the Faculty of Engineering and Computer Science.

The Department of Mechanical, Industrial, and Aerospace Engineering wishes to create two new courses.

The GCC approved this document with an edit to the covering memo. I therefore recommend that the Council of the School of Graduate Studies approve and recommend to Senate the above-mentioned curriculum changes in their final form.



cc: M. Debbabi, Associate Dean, Graduate Programs and Research, Faculty of Engineering and Computer Science  
O. Ward, University Curriculum Administrator, Office of the Provost and Vice-President, Academic Affairs

**INTERNAL MEMORANDUM**

Office of the Dean

**TO:** Dr. Bradley Nelson  
Chair, Graduate Curriculum Committee  
School of Graduate Studies

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**CC:** Ms. Frederica Martin  
Academic Programs Analyst  
School of Graduate Studies

**DATE:** March 28, 2018

**RE:** *Graduate Curriculum Proposal for the 2018-19 Academic Year*  
*Faculty of Engineering and Computer Science*

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At its meeting on March 9th, 2018, the Council of the Faculty of Engineering and Computer Science reviewed and approved, with some corrections to the graduate curriculum items proposed by the Department of Mechanical, Industrial, and Aerospace Engineering (MIAE), the creation of the following two new courses:

- MECH 6791 Aircraft Hydro-Mechanical and Fuel Systems
- MECH 6891 Aircraft Pneumatic and Electrical Power Systems

The courses will be part of a faculty member's teaching load and drawn from the Department's current course allotment.

Details of the new course proposals are indicated and explained in the Department's internal memorandum and in the dossier MECH-105.

We kindly request that this dossier be placed on the next agenda of the Graduate Curriculum Committee.

Thank you for your consideration of this proposal.



FACULTY OF ENGINEERING  
AND COMPUTER SCIENCE

Office of the Dean

## INTERNAL MEMORANDUM

**TO:** Dr. Amir Asif  
Chair of the Faculty Council  
Faculty of Engineering and Computer Science

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**DATE:** February 22, 2018

**RE:** **Graduate Curriculum Proposal for the 2018-20 Academic Year**  
**Department of Mechanical, Industrial and Aerospace Engineering (MIAE)**

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At its meeting on February 21, 2018, the Engineering and Computer Science Graduate Studies Committee (ECGSC) reviewed and approved, with minor corrections, the creation of two permanent courses proposed by the MIAE Department:

1. MECH 6791 Aircraft Hydro-Mechanical and Fuel Systems
2. MECH 6891 Aircraft Pneumatic and Electrical Power Systems

There are no resource implications for both courses as they will be part of a teaching load of a faculty member. The two courses will enhance the department's offerings in aircraft knowledge and training. Details of the course proposals are indicated and explained in the Department's internal memorandum and forms (MECH-105 dossier).

We kindly request that this item be placed on the next agenda of the Faculty Council for approval.

Thank you for your consideration of this proposal.

## INTERNAL MEMORANDUM

**TO:** Dr. M. Debabbi  
Associate Dean  
Research & Graduate Studies Engineering  
& Computer Science

**FROM:** Dr. A. Dolatabadi  
Graduate Program Director  
Department of Mechanical, Industrial and Aerospace Engineering

**DATE:** February 9<sup>th</sup>, 2018

**SUBJECT:** New Courses

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The Department of Mechanical, Industrial and Aerospace Engineering proposes two new listed elective courses ***MECH 6791 Aircraft Hydro-Mechanical and Fuel Systems, and MECH 6891 Aircraft Pneumatic and Electrical Power Systems***. These courses have been approved by the MIAE Department Faculty Council on January 26 2018.

University graduates with knowledge in aircraft systems are almost non-existent in the aerospace job market, as only very few universities worldwide are teaching these topics. However, a very big portion in the aerospace job market is requiring knowledge in aircraft systems (which was also acknowledged by the Centre d'adaptation de la main-d'oeuvre aérospatiale au Québec - CAMAQ). Normally, training on the job is done. Often, the hires come from mechanical, electrical engineering, train or car industry and are trained for the aerospace context. "Traditional" aerospace engineers are not well equipped to work in the various aircraft systems domains.

The two courses that are proposed cover the design principles of the major aerospace systems in sufficient depth. These two courses, which can be taken independently, enhance Concordia's unique offering in aerospace education for the Master of Aerospace Engineering program compared to the other universities in Montreal and worldwide.

**DOSSIER TITLE: MECH-105**

**DESCRIPTION OF CHANGE: New elective courses for Aerospace Engineering**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019

**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Aerospace Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Editorial                       Requirements                       Regulations  
 New Program                       Program Deletion

<b>Present Text</b> (Text from 2018 – 2019 Calendar)	<b>Proposed Text</b>
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>Aerospace MEng</b></p> <p><b>Admission Requirements.</b> Applicants must hold a Bachelor's degree in engineering or equivalent with high standing. For further details, refer to the section <a href="#">Admission Requirements</a> for Master of/Magisteriate in Engineering in the appropriate pages of the graduate calendar.</p> <p><b>Requirements for the Degree</b></p> <p>Students must complete a minimum of 45 credits of academic work consisting of: 36 credits of course work in the 6000 or 7000 level (2 courses must be taken outside Concordia), Aerospace Case Study (minimum 3 credits) and an Industrial Stage (6 credits). The selection of courses must be approved by the program director. For course prerequisites, refer to the course descriptions.</p> <p><b>Note:</b> Some graduate courses are content equivalent with specified undergraduate courses. These courses are not available for credit to students who have completed the undergraduate equivalent. Refer to the course description where such courses are marked with an (*).</p>	<p><b>Aerospace MEng</b></p> <p><b>Admission Requirements.</b> Applicants must hold a Bachelor's degree in engineering or equivalent with high standing. For further details, refer to the section <a href="#">Admission Requirements</a> for Master of/Magisteriate in Engineering in the appropriate pages of the graduate calendar.</p> <p><b>Requirements for the Degree</b></p> <p>Students must complete a minimum of 45 credits of academic work consisting of: 36 credits of course work in the 6000 or 7000 level (2 courses must be taken outside Concordia), Aerospace Case Study (minimum 3 credits) and an Industrial Stage (6 credits). The selection of courses must be approved by the program director. For course prerequisites, refer to the course descriptions.</p> <p><b>Note:</b> Some graduate courses are content equivalent with specified undergraduate courses. These courses are not available for credit to students who have completed the undergraduate equivalent. Refer to the course description where such courses are marked with an (*).</p>

1. **General/Preparatory Core Courses.** Normally, 12 credits are required to be completed from the list provided below. Any request for change on this requirement must be approved by the program director. Depending on the background, it may be required for the student to complete certain specified preparatory courses as part of their program.

ENCS 6021 Engineering Analysis  
ENCS 6141 Probabilistic Methods in Design  
INDU 6131 Graph Theory with System Applications  
INDU 6211 Production Systems and Inventory Control  
INDU 6241 Lean Manufacturing  
INDU 6351 System Reliability  
ENGR 6131 Linear Systems (\*)  
ENGR 6201 Fluid Mechanics  
ENGR 6421 Standards, Regulations and Certification  
ENGR 6441 Materials Engineering for Aerospace  
ENGR 6461 Avionic Navigation Systems  
ENGR 6501 Applied Elasticity  
ENGR 7181 Digital Control of Dynamics Systems  
MECH 6451 Computer-Aided Mechanical Design  
MECH 6481 Aeroelasticity  
MECH 6941 Concurrent Engineering in Aerospace Systems

1. **General/Preparatory Core Courses.** Normally, 12 credits are required to be completed from the list provided below. Any request for change on this requirement must be approved by the program director. Depending on the background, it may be required for the student to complete certain specified preparatory courses as part of their program.

ENCS 6021 Engineering Analysis  
ENCS 6141 Probabilistic Methods in Design  
INDU 6131 Graph Theory with System Applications  
INDU 6211 Production Systems and Inventory Control  
INDU 6241 Lean Manufacturing  
INDU 6351 System Reliability  
ENGR 6131 Linear Systems (\*)  
ENGR 6201 Fluid Mechanics  
ENGR 6421 Standards, Regulations and Certification  
ENGR 6441 Materials Engineering for Aerospace  
ENGR 6461 Avionic Navigation Systems  
ENGR 6501 Applied Elasticity  
ENGR 7181 Digital Control of Dynamics Systems  
MECH 6451 Computer-Aided Mechanical Design  
MECH 6481 Aeroelasticity  
[MECH 6791 Aircraft Hydro-Mechanical and Fuel Systems \(\\*\)](#)  
[MECH 6891 Aircraft Pneumatic and Electrical Power Systems \(\\*\)](#)  
MECH 6941 Concurrent Engineering in Aerospace Systems

**Rationale:** Changes reflect the addition of two courses.

**Resource Implications:** None.

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MECH-105**

**DESCRIPTION OF CHANGE: New elective courses for Aerospace Engineering**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2018/2019

Implementation Month/Year: January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Aerospace Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an “X”) A separate form is required for each change.

Editorial                       Requirements                       Regulations  
 New Program                       Program Deletion

<b>Present Text</b> (Text from 2018 – 2019 Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<h2>List of Courses by Topic Areas</h2> <p><b>E11 - AERONAUTICS AND ASTRONAUTICS</b></p> <p>ENGR 6421 Standards, Regulations and Certification ENGR 6441 Materials Engineering for Aerospace ENGR 6461 Avionic Navigation Systems ENGR 6471 Integration of Avionics Systems (*) ENGR 6951 Seminar on Space Studies ENGR 7201 Micro-gravity Fluid Dynamics ENGR 7461 Avionic Systems Design ENGR 7961 Industrial “Stage” and Training MECH 6091 Flight Control Systems MECH 6111 Gas Dynamics (*) MECH 6121 Aerodynamics (*) MECH 6161 Gas Turbine Design (*) MECH 6171 Turbomachinery and Propulsion (*) MECH 6231 Helicopter Flight Dynamics MECH 6241 Operational Performance of Aircraft</p>	<h2>List of Courses by Topic Areas</h2> <p><b>E11 - AERONAUTICS AND ASTRONAUTICS</b></p> <p>ENGR 6421 Standards, Regulations and Certification ENGR 6441 Materials Engineering for Aerospace ENGR 6461 Avionic Navigation Systems ENGR 6471 Integration of Avionics Systems (*) ENGR 6951 Seminar on Space Studies ENGR 7201 Micro-gravity Fluid Dynamics ENGR 7461 Avionic Systems Design ENGR 7961 Industrial “Stage” and Training MECH 6091 Flight Control Systems MECH 6111 Gas Dynamics (*) MECH 6121 Aerodynamics (*) MECH 6161 Gas Turbine Design (*) MECH 6171 Turbomachinery and Propulsion (*) MECH 6231 Helicopter Flight Dynamics MECH 6241 Operational Performance of Aircraft MECH 6251 Space Flight Mechanics and Propulsion Systems MECH 6471 Aircraft Structures <a href="#">MECH 6791 Aircraft Hydro-Mechanical and Fuel Systems (*)</a> <a href="#">MECH 6891 Aircraft Pneumatic and Electrical Power Systems (*)</a> MECH 6941 Concurrent Engineering in Aerospace Systems MECH 6961 Aerospace Case Study I</p>

<p><b>MECH 6251 Space Flight Mechanics and Propulsion Systems</b></p> <p><b>MECH 6471 Aircraft Structures</b></p> <p><b>MECH 6941 Concurrent Engineering in Aerospace Systems</b></p> <p><b>MECH 6961 Aerospace Case Study I</b></p> <p><b>MECH 6971 Aerospace Case Study II</b></p>	<p><b>MECH 6971 Aerospace Case Study II</b></p>
<p><b>Rationale:</b> The Department deems that the two courses are essential in its course offerings as it has been an ongoing area of interest to Faculty and students, conducting research in design principles of the major aerospace systems areas. A detailed rationale for the addition of the courses can be found in the course forms.</p> <p><b>Resource Implications:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC,

**DOSSIER TITLE: MECH-105**  
**COURSE NUMBER MECH 6791**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019  
**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science **Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Aerospace, Mechanical and Industrial Engineering **Degree:** MEng, MAsC, PhD **Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text</b> (Text from 20xx – 20xx Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>MECH 6791 Aircraft Hydro-Mechanical and Fuel Systems (*)</b>(4 credits)            Prerequisite: ENGR 6201.            This course focuses on design principles and sizing of the following aircraft systems: hydraulic system, primary and secondary flight control actuation systems, landing gear systems, and fuel system. Traditional and new technology implementations in aircraft, helicopters and other aerospace vehicles are considered. Associated standards and regulations are described. Principles of architecture development and integration, as well as engineering tools for system sizing and simulation are covered. A project is required.</p>
<p><b>Rationale:</b> University graduates with knowledge in aircraft systems are almost non-existent in the aerospace job market, as only very few universities worldwide are teaching these topics. However, a very big portion in the aerospace job market is requiring knowledge in aircraft systems (which was also acknowledged by the Centre d'adaptation de la main-d'oeuvre aérospatiale au Québec - CAMAQ). Normally, training on the job is done. Often, the hires come from mechanical or electrical engineering or train or car industry and are trained for the aerospace context. "Traditional" aerospace engineers are not well equipped to work in the various aircraft systems domains.</p> <p>Therefore, the course is proposed which covers the design principles of the major aerospace systems in sufficient depth. The course, which can be taken independently, enhances Concordia's unique offering in aerospace education for the Master of Aerospace Engineering Program and for the Bachelor of Aerospace Engineering Program compared to the other universities in Montreal and worldwide.</p> <p>The Laboratoire d'enseignement des systèmes intégrés en aérospatiale du Québec (LESIAQ) facility will be used for course and laboratories and projects.</p> <p>Also, mechanical or electrical engineering students could benefit from the course on hydraulic, electrical and air conditioning systems (most of the topics can be applied to other transportation systems such as trains, buses, cars and ships).</p> <p>Although the material covered in the cross-listed courses is the same, graduate students will be required to do an individual project while the undergraduate students will do a team project. Also graduate students will have different questions in the exams than their undergraduate counterparts.</p>	

**Resource Implications:** The course will be part of a faculty member's teaching load and drawn from our current course allotment.

**Other Programs within which course is listed:** This course is cross-listed with the Undergraduate Aerospace Programs (BEng) AERO 471 (see MECH-109 dossier).

**DOSSIER TITLE: MECH-105**  
**COURSE NUMBER MECH 6891**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018-19  
**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Aerospace Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text</b> (Text from 20xx – 20 xx Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>MECH 6891 Aircraft Pneumatic and Electrical Power Systems (*)</b> (4 credits)            Prerequisite: ENGR 6201.            This course focuses on design principles and sizing of the following aircraft systems: electrical power system, auxiliary and emergency power systems, environmental control system, ice and rain protection system, and pneumatic power system. Traditional and new technology implementations in aircraft, helicopters and other aerospace vehicles are considered. Associated standards and regulations are described. Principles of architecture development and integration, as well as engineering tools for system sizing and simulation are covered. A project is required, including a laboratory component.</p>
<p><b>Rationale:</b> University graduates with knowledge in aircraft systems are almost non-existent in the aerospace job market, as only very few universities worldwide are teaching these topics. However, a very big portion in the aerospace job market is requiring knowledge in aircraft systems (which was also acknowledged by the Centre d'adaptation de la main-d'oeuvre aérospatiale au Québec - CAMAQ). Normally, training on the job is done. Often, the hires come from mechanical or electrical engineering or train or car industry and are trained for the aerospace context. "Traditional" aerospace engineers are not well equipped to work in the various aircraft systems domains.</p> <p>Therefore, the course is proposed which covers the design principles of the major aerospace systems in sufficient depth. The course, which can be taken independently, enhances Concordia's unique offering in aerospace education for the Master of Aerospace Engineering Program and for the Bachelor of Aerospace Engineering Program compared to the other universities in Montreal and worldwide.</p> <p>The Laboratoire d'enseignement des systèmes intégrés en aérospatiale du Québec (LESIAQ) facility will be used for course and laboratories and projects.</p> <p>Also, mechanical or electrical engineering students could benefit from the course on hydraulic, electrical and air conditioning systems (most of the topics can be applied to other transportation systems such as trains, buses, cars and ships).</p> <p>Although the material covered in the cross-listed courses is the same, graduate students will be required to do an individual project while the undergraduate students will do a team project. Also graduate students will have different questions in the exams than their undergraduate counterparts.</p>	

**Resource Implications:** The course will be part of a faculty member's teaching load and drawn from our current course allotment.

**Other Programs within which course is listed:** This course is cross-listed with the Undergraduate Aerospace Programs (BEng) AERO 472 (see MECH 109 dossier).

**MEMO TO:** Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning

**FROM:** Brad Nelson, Associate Dean, Academic Programs and Development  
School of Graduate Studies

**DATE:** April 23, 2018

**SUBJECT: GRADUATE CURRICULUM CHANGES (MECH-107)  
(CALENDAR – 2018-2019)  
DEPARTMENT OF MECHANICAL, INDUSTRIAL, AND AEROSPACE  
ENGINEERING  
FACULTY OF ENGINEERING AND COMPUTER SCIENCE**

The Graduate Curriculum Committee (GCC) reviewed the curriculum changes approved by the Faculty of Engineering and Computer Science.

The Department of Mechanical, Industrial, and Aerospace Engineering wishes to create three new courses and bring amendments to two existing ones.

The GCC approved this document with edits to the description and rationale of INDU 6111. I therefore recommend that the Council of the School of Graduate Studies approve and recommend to Senate the above-mentioned curriculum changes in their final form.



cc: M. Debbabi, Associate Dean, Graduate Programs and Research, Faculty of Engineering and Computer Science  
O. Ward, University Curriculum Administrator, Office of the Provost and Vice-President, Academic Affairs

**INTERNAL MEMORANDUM**

**TO:** Dr. Bradley Nelson  
Chair, Graduate Curriculum Committee  
School of Graduate Studies

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**CC:** Ms. Frederica Martin  
Academic Programs Analyst  
School of Graduate Studies

**DATE:** April 16, 2018

**RE:** **Graduate Curriculum Proposal for the 2018-19 Academic Year**  
**Faculty of Engineering and Computer Science**

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At its meeting on April 13th, 2018, the Council of the Faculty of Engineering and Computer Science reviewed and approved, with some corrections, the graduate curriculum items proposed by the Department of Mechanical, Industrial and Aerospace Engineering (MIAE). As part of its restructuring the MEng program in industrial engineering, the MIAE Department proposed the creation of the following three new courses:

- i) *INDU 6381 – Applications of Reliability Engineering*
- ii) *INDU 6391 - Reliability and Maintenance for Design and Manufacturing*
- iii) *INDU 6251 - Facilities Planning and Warehouse Operations*

INDU 6381 has been offered twice as a slot course over the last two years with increasing enrolment from 10 to 25 students and with a class capacity of 30 seats. INDU 6391 has also been offered as a slot course over the last two years with increasing enrolment from 25 to 49 students with a class capacity of 50 seats. All three new courses are essential in enhancing the manufacturing and operation planning areas of the industrial engineering program. In particular, INDU 6251 is essential for facility management and warehouse operations, which can be used as an elective course for industrial engineering.

In addition, the Department proposed changes to the course description of *INDU 6111 Theory of Operations Research* and changes to the course name and description of *INDU 6121 Advanced Operations Research*.

There are no resource implications as these courses will be part of a faculty member's teaching load and drawn from the Department's current course allotment.

Details of the curriculum items are indicated and explained in the Department's and Faculty's internal memorandum and in the MECH-107 dossier.

We kindly request that this dossier be placed on the next agenda of the Graduate Curriculum Committee.

Thank you for your consideration of this proposal.

**INTERNAL MEMORANDUM**

**TO:** Dr. Amir Asif  
Chair of the Faculty Council  
Faculty of Engineering and Computer Science

**FROM:** Dr. M. Debbabi  
Associate Dean, Graduate Programs and Research  
Faculty of Engineering and Computer Science

**DATE:** March 28, 2018

**RE:** **Graduate Curriculum Proposal for the 2018-19 Academic Year**  
**Department of Mechanical, Industrial and Aerospace Engineering (MIAE)**

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At its meeting on March 27, 2018, the Engineering and Computer Science Graduate Studies Committee (ECSGSC) reviewed and approved, with minor modifications, the curriculum items proposed by the MIAE Department. Namely, the creation of the following three new courses:

- i) *INDU 6381 – Applications of Reliability Engineering*
- ii) *INDU 6391 - Reliability and Maintenance for Design and Manufacturing*
- iii) *INDU 6251 - Facilities Planning and Warehouse Operations*

The courses INDU 6381 and INDU 6391 have been offered as slot courses over the last two years with increasing enrolment. The new courses are essential in enhancing the manufacturing and operation planning areas of the industrial engineering program. INDU 6251 is essential for facility management and warehouse operations, which can be used as an elective course for industrial engineering. There are no resource implications as these new courses will be part of a faculty member's teaching load and drawn from the Department's current course allotment.

In addition, the Department proposed changes to the course description of *INDU 6111 Theory of Operations Research* and changes to the course name and description of *INDU 6121 Advanced Operations Research*.

The proposed changes reflect the curriculum restructuring of the graduate (e.g. MEng) degree programs in industrial engineering, as well as to keep pace with ever-changing industry needs and trends.

Details of the curriculum items are indicated and explained in the Department's internal memorandum and in the MECH-107 dossier.

We kindly request that this item be placed on the next agenda of the Faculty Council for approval.

Thank you for your consideration of this proposal.



## INTERNAL MEMORANDUM

**TO:** Dr. M. Debabbi  
Associate Dean  
Research & Graduate Studies  
Engineering & Computer Science

**FROM:** Dr. A. Dolatabadi  
Graduate Program Director  
Department of Mechanical and Industrial Engineering

**DATE:** March 23, 2018

**SUBJECT:** Permanent Courses INDU 6381, 6391, 6251, 6111, 6121

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The Department of Mechanical, Industrial and Aerospace Engineering is in the process of restructuring its Master of Engineering program in Industrial Engineering. As part of the proposed changes to strengthen our manufacturing and operation planning areas, we would like to propose to make two slot courses permanent ones (INDU 6381 and INDU 6391) which have been offered over the last two years, as well as introducing a new course INDU 6251.

- INDU 6381 – Applications of Reliability Engineering
- INDU 6391 - Reliability and Maintenance for Design and Manufacturing
- INDU 6251 - Facilities Planning and Warehouse Operations

There are no resource implications as these new courses will be part of a faculty member's teaching load and drawn from our current course allotment.

In addition, we are proposing changes to the course description of *INDU 6111 Theory of Operations Research* and changes to the course name and description of *INDU 6121 Advanced Operations Research*.

These changes have been approved unanimously by the Department Graduate Studies Committee (DGSC) and at the Department Council meeting that took place on September 18, 2017.

**DOSSIER TITLE: MECH-107**

**DESCRIPTION OF CHANGE: Topic Area E12**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed [ ] Undergraduate or [ X ] Graduate Curriculum Changes

Calendar for Academic Year: 2018/2018

Implementation Month/Year: January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Industrial Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an “X”) A separate form is required for each change.

- Editorial                       Requirements                       Regulations
- New Program                       Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in ‘present text’ ( <del>strike out text sections to be changed or deleted</del> ) and in ‘proposed text’ ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
<p><b>List of Courses by Topic Areas</b></p> <p>E12 - INDUSTRIAL ENGINEERING</p> <p>INDU 6111 Theory of Operations Research (4 credits)</p> <p>INDU 6121 <del>Advanced Operations Research</del> (4 credits)</p> <p>INDU 6131 Graph Theory with System Applications (4 credits)</p> <p>INDU 6141 Logistics Network Models (*) (4 credits)</p> <p>INDU 6151 Decision Models in Service Sector (*) (4 credits)</p> <p>INDU 6211 Production Systems and Inventory Control (4 credits)</p> <p>INDU 6221 Lean Enterprise (4 credits)</p> <p>INDU 6231 Scheduling Theory (4 credits)</p> <p>INDU 6241 Lean Manufacturing (4 credits)</p> <p>INDU 6311 Discrete System Simulation (4 credits)</p> <p>INDU 6321 Introduction to Six Sigma (*) (4 credits)</p> <p>INDU 6331 Advanced Quality Control (4 credits)</p> <p>INDU 6341 Advanced Concepts in Quality Improvement (*) (4 credits)</p> <p>INDU 6351 System Reliability (4 credits)</p> <p>INDU 6361 Discrete Optimization (4 credits)</p> <p>INDU 6411 Human Factors Engineering (*) (4 credits)</p> <p>INDU 6421 Occupational Safety Engineering (*) (4 credits)</p>	<p><b>List of Courses by Topic Areas</b></p> <p>E12 - INDUSTRIAL ENGINEERING</p> <p>INDU 6111 Theory of Operations Research (4 credits)</p> <p>INDU 6121 <u>Applied Optimization</u> (4 credits)</p> <p>INDU 6131 Graph Theory with System Applications (4 credits)</p> <p>INDU 6141 Logistics Network Models (*) (4 credits)</p> <p>INDU 6151 Decision Models in Service Sector (*) (4 credits)</p> <p>INDU 6211 Production Systems and Inventory Control (4 credits)</p> <p>INDU 6221 Lean Enterprise (4 credits)</p> <p>INDU 6231 Scheduling Theory (4 credits)</p> <p>INDU 6241 Lean Manufacturing (4 credits)</p> <p><u>INDU 6251 Facilities Planning and Warehouse Operations (4 credits)</u></p> <p>INDU 6311 Discrete System Simulation (4 credits)</p> <p>INDU 6321 Introduction to Six Sigma (*) (4 credits)</p> <p>INDU 6331 Advanced Quality Control (4 credits)</p> <p>INDU 6341 Advanced Concepts in Quality Improvement (*) (4 credits)</p> <p>INDU 6351 System Reliability (4 credits)</p> <p>INDU 6361 Discrete Optimization (4 credits)</p> <p><u>INDU 6381 Applications of Reliability Engineering (4 credits)</u></p> <p><u>INDU 6391 Reliability and Maintenance for Design and Manufacturing (4 credits)</u></p> <p>INDU 6411 Human Factors Engineering (*) (4 credits)</p>

	INDU 6421 Occupational Safety Engineering (*) (4 credits)
<p><b>Rationale:</b> The Department is in the process of restructuring the Master's program in Industrial Engineering. The proposed courses will complement manufacturing and operations planning areas.</p> <p><b>Resource Implications:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MECH-107**  
**COURSE NUMBER: INDU 6111**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2018/2019

Implementation month/Year: January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Industrial Engineering

**Degree:** MAsC, MEng, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an “X”) A separate form is required for each change.

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - \_\_\_\_\_       New Course       Course Deletion

<b>Present Text</b> (Text from 2018 – 2019 Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>INDU 6111 Theory of Operations Research</b>  <del>Linear programming; examples of linear programming problems; simplex algorithm; degeneracy; cycling and Bland anti-cycling rules; revised simplex method; duality; dual simplex method; sensitivity analysis; primal dual method; network optimization: the trans-shipment problem and the network simplex method; transportation and optimal assignment problems. Project: two hours per week.</del>  <del><b>Note:</b> Students who have taken ENCS 6151 may not receive credit for this course.</del></p>	<p><b>INDU 6111 Theory of Operations Research</b>  <a href="#">This course introduces the fundamentals of convex analysis such as polyhedral sets and the representation theorem. Advanced topics in linear optimization are also covered, such as state-of-the-art solution methods (revised and dual simplex methods, path following interior point methods), duality theory and parametric analysis, Farkas lemma, and KKT optimality conditions. An introduction to other advanced topics (Dantzig-Wolfe decomposition, dynamic programming, and stochastic decision processes) is given. A project is required.</a></p>
<p><b>Rationale:</b> The proposed changes aim at improving the content of this course to better meet the needs of research oriented students. On the one hand, it provides the theoretical foundations needed to better understand how and why well-known solution algorithms in linear optimization, such as the simplex method and its variants, work in practice. On the other hand, it incorporates new topics that have emerged over the last two decades which have significantly changed the way large-scale linear optimization problems are now solved with state-of-the-art solvers such as CPLEX, GUROBI and XPRESS. These include interior point methods and stochastic decision processes</p> <p>In addition, ENCS 6151 is no longer offered (since January 2014) and it is no longer in the calendar.</p> <p><b>Resource Implications:</b> None</p> <p><b>Other Programs within which course is listed:</b> None</p>	

**DOSSIER TITLE: MECH-107**

**COURSE NUMBER: INDU 6121**

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2018/2019

**Proposed**  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Industrial Engineering

**Degree:** MAsC, MEng, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number

Course Title

Credit Value

Prerequisite

Course Description

Editorial

Other - Specify: \_\_\_\_\_

New Course

Course Deletion

<b>Present Text</b> (Text from 2018 – 2019 Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><del>INDU 6121 <b>Advanced Operations Research</b></del>  <del>Mathematical modelling of industrial systems, including manufacturing and service systems, using integer programming (IP), network analysis, dynamic programming, non-linear programming and other optimization models. Introduction to stochastic optimization models. Traditional and advanced techniques to solve those models and industrial problems. Enumerative algorithms for solving IP and dynamic programming problems, post-optimality analysis. Applications in the design and operation of industrial systems. A design project is required. Note: Students who have taken ENCS 6211 may not receive credit for this course.</del></p>	<p><b>INDU 6121 Applied Optimization</b>  <u>Topics include model building in optimization, model validation, economic interpretation, sensitivity analysis, algorithms and commercial optimization software for problem solving. Mathematical models in deterministic and non-deterministic settings with linear, integer, and nonlinear programming formulations are developed. Applications of optimization models in production, transportation, finance, scheduling, and healthcare systems are presented. A project is required.</u></p>
<p><b>Rationale:</b>  This graduate course with the proposed revisions provides graduate students of Industrial Engineering as well as those of other engineering backgrounds with the opportunity to gain knowledge in IE with a solid foundation, enlarged scopes and in-depth understanding in building mathematical models and in developing computational skills required to tackle real-world decision-making problems arising in a wide variety of applications. Contrary to other existing courses in operations research and optimization at Concordia which adopt a more theoretical and algorithmic approach, this course focuses on the building, solving, and interpreting of optimization models by using state-of-the-art optimization software. It covers the application of deterministic optimization techniques such as linear, integer and nonlinear programming. It also provides an introduction to optimization models under uncertainty. It gives a brief overview of the algorithms used in commercial optimization software such as the simplex method and the branch-and-bound method. In a project, the students will learn the fundamentals of state-of-the-art optimization software to tackle real-life optimization problems. In particular, the project will provide students with the required knowledge to i) build mathematical models using the Optimization Programming Language (OPL) and ii) learn how to use CPLEX Studio IDE to interact with various CPLEX optimizers to solve linear, integer and nonlinear programs. CPLEX is one of the most powerful optimization solvers developed by IBM and is widely used in the industry and academia. Free academic licenses of this software are offered to university researchers and students for teaching and research purposes.</p>	

**Resource Implications:** None

**Other Programs within which course is listed:** None

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MECH-107**  
**COURSE NUMBER: INDU 6251**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019

**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science  
**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Industrial Engineering **Degree:** MAsC, MEng, PhD **Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- |  |   |  |  |   |
|--|---|--|--|---|
| <input type="checkbox"/> Course Number | <input type="checkbox"/> Course Title           | <input type="checkbox"/> Credit Value          | <input type="checkbox"/> Prerequisite    | <input type="checkbox"/> Course Description |
| <input type="checkbox"/> Editorial     | <input type="checkbox"/> Other - Specify: _____ | <input checked="" type="checkbox"/> New Course | <input type="checkbox"/> Course Deletion |   |

<b>Present Text</b> (Text from 20 xx 20xx Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
	<p><b>INDU 6251 Facilities Planning and Warehouse Operations</b> (4 credits)</p> <p>This course is designed to provide advanced concepts, theory and procedures for the study of facilities location, physical layouts, material flow, and material handling, warehouse operations planning and management systems, warehouse design, automation and control. Analytical procedures are developed to enhance the decision-making process in the design, rationalization and improvement of manufacturing or service facilities. The knowledge learned in this course is integrated with knowledge from related courses to develop a design project. A project is required.</p>
<p><b>Rationale:</b> The Industrial Engineering program has been lacking a course in this area. Facilities design and warehouse operations are important topics in industrial engineering and must be covered as part of the graduate curriculum.</p> <p><b>Resource Implications:</b></p> <p>This course will be part of a faculty member's teaching load and drawn from our current course allotment.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

**DOSSIER TITLE:** MECH-107

**COURSE NUMBER:** INDU 6381

**NEW COURSE:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019

**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Industrial Engineering

**Degree:** MEng, MASc, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text</b> (Text from 20xx– 20xx Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<b>INDU 6381 Applications of Reliability Engineering</b> (4 credits) Topics include an introduction to reliability function; reliability program; failure; requirement allocation and design optimization; painless risk management; design optimization by test; validation; durability; stress-strength; nuisances and no fault found (NFF); operating with failure; fail-safe and operating with failure; real-time health monitoring. A project is required. <b>Note:</b> Students who have taken INDU 691 (Application of Reliability Engineering) may not receive credit for this course.
<b>Rationale:</b> The Department is in the process of restructuring the Master's program in Industrial Engineering. The proposed course will complement manufacturing and operation planning areas. This course has been offered as a slot course twice in the Winter of 2017 and Winter of 2018 with 10 and 25 registered students respectively. The course capacity was 50 and 30 students respectively.	
<b>Resource Implications:</b> It will be part of the faculty's teaching load.	
<b>Other Programs within which course is listed:</b> None.	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE:** MECH-107

**COURSE NUMBER:** INDU 6391

**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2018/2019

**Implementation Month/Year:** January 2019

**Faculty:** Engineering and Computer Science

**Department:** Mechanical, Industrial and Aerospace Engineering

**Program:** Industrial Engineering

**Degree:** MEng, MAsC, PhD

**Section Title:** Summer 2018

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number       Course Title       Credit Value       Prerequisite       Course Description  
 Editorial       Other - Specify: \_\_\_\_\_       New Course       Course Deletion

<b>Present Text</b> (Text from 20xx– 20xx Calendar)	<b>Proposed Text</b>
Paste description from current calendar in 'present text' ( <del>strike out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>INDU 6391 Reliability and Maintenance for Design and Manufacturing</b> (4 credits) Topics include fundamentals of product design and system validation methodologies to establish maintenance programs; design of experiment, test for design validation, pass/fail analysis, reliability growth models, reliability centred maintenance, test for manufacturing; accelerated life and stress tests; failure reporting, analysis and corrective action systems (FRACAS), maintenance programs, lifecycle analysis, end-of-life analysis and industrial approach for reliability; concepts and topics will be covered through real-life case studies. A project is required. <b>Note:</b> Students who have taken INDU 691 (Reliability and Maintenance for Design and Manufacturing) may not receive credit for this course.</p>
<p><b>Rationale:</b> The Department is in the process of restructuring the Master's program in Industrial Engineering. The proposed course will complement manufacturing and operation planning areas. This course has been offered twice as a slot course in the Winter of 2017 and in the Winter of 2018 with 25 and 50 registered students respectively. The course capacity was 27 and 50 students respectively.</p> <p><b>Resource Implications:</b> It will be part of the faculty member's regular teaching load.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

**FACULTY OF FINE ARTS**

## INTERNAL MEMORANDUM

**TO:** Dr. Sandra Gabriele, Vice-Provost, Innovation in Teaching and Learning; Chair, Academic Programs Committee

**FROM:** Dr. Rebecca Duclos, Dean, Faculty of Fine Arts

**CC:** Ms. Olivia Ward, University Curriculum Administrator, Office of the Provost  
Dr. Mark Sussman, Associate Dean, Academic Affairs, Faculty of Fine Arts

**DATE:** March 20, 2018

**RE:** Curriculum Dossier for the Department of Music, MUSI-18



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As Dean of the Faculty of Fine Arts, I fully support the curriculum changes proposed in MUSI-18. The dossier was reviewed and unanimously approved by the Fine Arts Faculty Council at its meeting on March 16, 2018.

There are no resource implications.

Rebecca Duclos  
Dean, Faculty of Fine Arts  
[Rebecca.Duclos@concordia.ca](mailto:Rebecca.Duclos@concordia.ca)  
848-2424 ext. 4602



## FACULTY OF FINE ARTS

### Internal Memorandum

**To:** Rebecca Duclos, Dean, Faculty of Fine Arts  
**From:** Mark Sussman, Associate Dean, Academic Affairs  
**Date:** March 9, 2018  
**Re:** Curriculum dossier, Department of Music, MUSI-18

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The Faculty of Fine Arts Curriculum Committee has reviewed and unanimously approved the MUSI-18 curriculum dossier from the Department of Music. We hereby submit this dossier for review at Faculty Council on March 16, 2018.

There are no resource implications.

With thanks for your consideration.

A handwritten signature in black ink, appearing to read "Mark Sussman".

Mark Sussman, PhD  
Associate Dean, Academic Affairs  
Faculty of Fine Arts  
[mark.sussman@concordia.ca](mailto:mark.sussman@concordia.ca)

To: Faculty Curriculum Committee, Fine Arts  
From: Mark Corwin, Chair, Department of Music  
Date: February 25, 2018  
Subject: **Curriculum Proposal MUSI-18**

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The curriculum proposal below was approved by the Department Curriculum Committee on January 29, 2018, and by the Departmental Council on February 12, 2018.

The Department is proposing the addition of two new Specializations in Electroacoustics to provide its growing population with deeper and more concentrated program specificity; the Specialization in Electroacoustic Creative Practices, and the Specialization in Electroacoustic Recording Arts.

It has been noted that more and more students in the current Electroacoustic Studies Major are completing more than their required number of credits before requesting to graduate. Many have commented to advisors that they still feel the need to polish their skills through taking additional upper-level course electives. In addition, students request a focus on either their recording arts skills or their composition with sound studies. The two proposed Specializations will give these individuals direct recognition in their advanced study according to their focus in either Creative or Recording practices in Electroacoustics. It will also be attractive to new students from the one-year trade schools who are unable to study to any great depth or extended experiential way in these one-year programs. The Specialization in Electroacoustic Creative Practices would focus on, among other things, areas such as electroacoustic composition, sound design, live improvisation and performance, musical instrument design (mechanical and digital), etc. The Specialization in Electroacoustic Recording Arts would focus on extended practices in recording such as studio session work, concert recording and live mixing, the recording producer and mastering.

In addition, the Minor in Electroacoustic Studies is adding EAST 200 *ASA and Aural Skills I* (Auditory Scene Analysis) to its requirements to better prepare students who complete the Minor for further studies in Music. This course is already offered as part of the requirements for the Major in Electroacoustic Studies.

## **Details**

### ***New Programs***

#### Specializations in Electroacoustic Studies

The Minor and Major in Electroacoustic Studies in 2017 received over 140 applications for 35 places in the program. Forty-two were eventually registered. Usually, more than 40% [up to about 60%] of those accepted come from outside Québec. The two main thrusts of student interest are 1) developing creative practices which include sound design and various forms of electroacoustic and sound arts, and 2) various elements of recording arts. Almost all students in the Major have interests in both areas. A close tracking of student

preferences and activities for some 15 years, has led to a gradual expansion of course offerings in both areas. With the addition of no new resources, the Department of Music is able to offer these two new Specializations.

Built upon the Major in Electroacoustic Studies, these two Specializations require applicants to have mastered the basics of their particular electroacoustic study. Students entering the Specialization in Electroacoustic Creative Practices will be expected to have mastered the course content of the introductory electroacoustic course EAST 205, either at Concordia or by demonstrated ability through their application portfolio. Students entering the Specialization in Electroacoustic Recording Arts will be expected to have mastered the course content of the introductory electroacoustic courses EAST 251 and 252, either at Concordia or by demonstrated ability through their application portfolio. These introductory courses will no longer count for credit within their respective 90-credit undergraduate degree programs. Each Specialization will require 24 credits of specific 300 and 400-level courses as compared to the current Major in Electroacoustic Studies. At the time of a student's acceptance into a Specialization, a note is sent to Academic Services of the Advanced Standing of the student with respect to EAST 205 and EAST 251, 252, depending on the Specialization. This 60-credit program also differs from the other Music Specializations because it does not include any requirement to take Private Instruction.

The following table is provided to compare the proposed Specializations with the current Major in Electroacoustic Studies. There are two things to note in the table. 1) The two right-hand columns indicate where an introductory course (as found in column 1) is no longer accepted for credit within that Specialization. Applicants will have achieved its content as part of their advanced background through previous training. And 2) the bottom of each row indicates a box showing courses that students in the Specializations are required to take. They are 24 credits of specific 300 and 400-level courses. These 24 credits are advanced level training specific to that Specialization.

Proposed Specializations comparison to Major

Current Major	Proposed Specialization in Electroacoustic Creative Practices	Proposed Specialization in Electroacoustic Recording Arts
<b>54 BFA Major in Electroacoustic Studies</b>	<b>60 BFA Specialization in Electroacoustic Creative Practices</b>	<b>60 BFA Specialization in Electroacoustic Recording Arts</b>
9 EAST 200 <sup>6</sup> , 211 <sup>3</sup>	9 EAST 200 <sup>6</sup> , 211 <sup>3</sup>	9 EAST 200 <sup>6</sup> , 211 <sup>3</sup>
6 EAST 251 <sup>3</sup> , 252	6 EAST 251 <sup>3</sup> , 252 <sup>3</sup>	<b>(not required – Advanced Standing)</b>
12 EAST 300 <sup>6</sup> , 310 <sup>6</sup>	12 EAST 300 <sup>6</sup> , 310 <sup>6</sup>	12 EAST 300 <sup>6</sup> , 310 <sup>6</sup>
3 MHIS 241 <sup>3</sup>	3 MHIS 241 <sup>3</sup>	3 MHIS 241 <sup>3</sup>
6 EAST 205 <sup>6</sup>	<b>(not required – Advanced Standing)</b>	6 EAST 205 <sup>6</sup>
6 EAST 305 <sup>6</sup>	6 EAST 305 <sup>6</sup>	6 EAST 305 <sup>6</sup>
<u>12 Electives in EAST</u> 9 Chosen from EAST electives, including a minimum of 6 credits at the 400 level 3 Department of Music electives	<u>24 credits of required courses</u> 6 EAST 362 <sup>3</sup> , 363 <sup>3</sup> 12 EAST 406 <sup>3</sup> , 407 <sup>3</sup> , 461 <sup>3</sup> , 462 <sup>3</sup> 6 EAST 481 <sup>3</sup> , 482 <sup>3</sup> , or electives chosen from EAST	<u>24 credits of required courses</u> 18 EAST 351 <sup>3</sup> , 352 <sup>3</sup> , 451 <sup>3</sup> , 452 <sup>3</sup> , 465 <sup>3</sup> , 466 <sup>3</sup> 6 EAST 481 <sup>3</sup> , 482 <sup>3</sup> , or electives chosen from EAST

The Specialization in Electroacoustic Creative Practices is focused on the development of the electroacoustic composer/creator/developer who will have expertise in both studio and live performing and creative practices. Studies in sound design for stereo through to multi-channel sound systems are complemented by live improvisation ensemble performance, the Concordia Laptop Orchestra (CLOrk), and modular synthesis construction, the Virtual Modular Synthesis (VMS) course. Many of the tools required to successfully negotiate the live aspects of the laptop orchestra are developed in the VMS course. Also required are the upper levels of Electroacoustic composition courses, 406 and 407, and their Capstone counterparts, EAST 461 and 462. Entry into this Specialization requires clearly articulated creative skills in the transformation of sound sources and the creation of sound art compositions.

The Specialization in Electroacoustic Recording Arts requires students take both the Intermediate and Advanced recording classes, EAST 351, 352, 451, 452. These courses develop breadth and proficiency in recording art practices. They provide both live concert and studio-based session recording skill development. Additional personalized training and skill development in recording art will be provided with the required Capstone Recording projects, EAST 465 and 466. These courses are not required in the Minor or Major in Electroacoustic Studies. Entry into this Specialization will require advanced levels of recording art experience.

Both Specializations offer the option of taking the Supervised Internship courses, EAST 481 and 482, or EAST electives. Many students in these Specializations will already have developed contacts and relationships with professional and/or commercial organizations that may be utilized in this regard. The Supervised Internship allows their training to extend into real-life environments, additionally augmenting their relationships with these organizations. Students currently have had supervised internships via an Independent Study course code. Students will be responsible for developing their own contacts and providing a proposal to the Department for approval. A list of potential organizations will be available for students as a guide. Currently this list includes organizations such as the Eastern Block, Rock Camp For Girls, Revolution Recording (Toronto), Autodesk Montreal and La Hacienda Studios.

A large majority of students in the Major in Electroacoustic Studies already graduate with many of the courses proposed for the new Specializations. The two Specializations will give them the appropriate recognition of their concentration on their BFA degree.

### ***Program Change***

#### **1) The addition of EAST 200 to the Minor in Electroacoustic Studies**

The Minor in Electroacoustic Studies is adding EAST 200 *ASA and Aural Skills I* (Auditory Scene Analysis) as a requirement to better prepare students in the Minor for further studies in music. Aural perception is one of the foundational skills that students often overlook in their primary training as a musician. Traditional music students understand its importance, but the non-traditionally trained electroacoustic student has not been exposed to this type of skill development in a formal fashion.

### ***General Housekeeping***

There are additional changes required to existing EAST courses to reflect the addition of the new Specializations in Electroacoustic Studies. None of these changes or additions have any resource implications.

The following grid gives a quick view of these changes.

Course	Prerequisite	Description	Note Addition
EAST 200	X	X	
EAST 205	X	X	X
EAST 211	X		
EAST 231		X	X
EAST 251	X	X	X
EAST 252	X		X
EAST 305	X	X	
EAST 331	X		X

**DOSSIER TITLE: MUSI-18**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020  
Implementation Month/Year: September 2019

**Faculty:** Fine Arts

**Department:** Music

**Program:** Minor, Major or Specializations in Electroacoustic Studies, Specializations in Music Performance and Music Composition

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Editorial       Requirements       Regulations  
 New Program       Program Deletion

<b>Present Text (Text from 2018 – 2019 Calendar)</b>	<b>Proposed Text</b>
<p>Paste description from current calendar in 'present text' (<del>strike-out text sections to be changed or deleted</del>) and in 'proposed text' (<u>underline additions and changes proposed</u>). Attach a separate sheet if necessary.</p> <p><b>SPECIALIZATIONS IN MUSIC</b> The Faculty of Fine Arts offers <del>three</del> specialization programs in Music, <del>each of 66 credits</del>. Students applying for entrance to the Specializations in Performance or Composition are accepted into the Major in Music. Upon completion of 30 credits, students may apply for transfer into one of those two specializations. Students applying for entrance to the Specialization in Jazz Studies may enter directly in their first year. Acceptance into a specialization is based on the student's general academic performance in all <del>university</del> courses, but especially in the <del>Music</del> courses.</p>	<p><b>SPECIALIZATIONS IN MUSIC</b> The Faculty of Fine Arts offers <u>five</u> specialization programs in Music. Students applying for entrance to the Specializations in <u>Music</u> Performance or <u>Music</u> Composition are accepted into the Major in Music. Upon completion of 30 credits, students may apply for transfer into one of those two specializations. Students applying for entrance to the Specializations in Jazz Studies, <u>Electroacoustic Creative Practices or Electroacoustic Recording Arts</u> may enter directly in their first year. Acceptance into a specialization is based on the student's general academic performance in all courses, but especially in the courses <u>relevant to their specialization</u>.</p>
<p><b>Rationale:</b> The new Specializations in Electroacoustic Studies also allow for direct entry similar to that of Jazz Studies. This Calendar addition makes this clear. Correction is also needed for the proper titles of the Music Specializations.</p>	
<p><b>Resource Implications:</b> None</p>	

**DOSSIER TITLE: MUSI-18**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020

Implementation Month/Year: September 2019

Faculty: Fine Arts

Department: Music

Program: Minor, Major or Specializations in Electroacoustic Studies

Degree: BFA

Section Title: 81.100

Type of Change: (please fill in all the appropriate boxes with an “X”) A separate form is required for each change.

Editorial       Requirements       Regulations  
 New Program       Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<p>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</p> <p><b>81.100.1 Admission to Programs in Music</b> In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to Music programs. All applicants to the <del>Major or Minor</del> in Electroacoustic Studies must submit a <i>portfolio</i> of their own work, <del>the Electroacoustic Information Sheet, and a letter of intent</del>. All applicants to the Major in Music and the Specialization in Jazz Studies must complete an <i>audition</i> and <i>Theory and Ear-Training Placement Tests</i>. For more information concerning these additional requirements and submission deadline dates, please visit the <del>following</del> website: <del>concordia.ca/finearts/future-students/applying-undergraduate</del>.</p>	<p><b>81.100.1 Admission to Programs in Music</b> In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to Music programs. All applicants to <u>an Electroacoustic program, including the Minor, Major or Specializations</u> must submit a <i>portfolio</i> of their own work. All applicants to the Major in Music and the Specialization in Jazz Studies must complete an <i>audition</i> and <i>Theory and Ear-Training Placement Tests</i>. For more information concerning these additional requirements and submission deadline dates, please visit the <u>Department of Music</u> website.</p>
<p><b>Rationale:</b> The information on the Department of Music website gives additional, more specific, and up-to-date information about admissions procedures for applicants to Music programs. The Department of Music uses an on-line Admission process that incorporates the Electroacoustic Information Sheet and letter of intent in its questionnaire. The reference to an Information sheet and a letter of intent is no longer required explicitly. Text is being updated to reflect the addition of the two new Specializations.</p> <p><b>Resource Implications:</b> None</p>	

**DOSSIER TITLE: MUSI-18**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM** – (please fill in all the appropriate information)

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020

Implementation Month/Year: September 2019

Faculty: Fine Arts

Department: MUSIC

Program: **Specialization in Electroacoustic Creative Practices**

Degree: **BFA**

Section Title: **81.100**

Type of Change: (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

- Editorial       Requirements       Regulations  
 New Program       Program Deletion

Present Text (Text from 20__ – 20__ Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted)	and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.  <b>60 <u>BFA Specialization in Electroacoustic Creative Practices</u></b> <u>12 EAST 200<sup>6</sup>, 211<sup>3</sup>; MHIS 241<sup>3</sup></u> <u>6 EAST 251<sup>3</sup>, 252<sup>3</sup></u> <u>18 EAST 300<sup>6</sup>, 305<sup>6</sup>, 310<sup>6</sup></u> <u>6 EAST 362<sup>3</sup>, 363<sup>3</sup></u> <u>12 EAST 406<sup>3</sup>, 407<sup>3</sup>, 461<sup>3</sup>, 462<sup>3</sup></u> <u>6 EAST 481<sup>3</sup>, 482<sup>3</sup>, or electives chosen from EAST</u>
<p><b>Rationale:</b> This Specialization is in response to generally higher skill levels in applicants. Built upon the Major in Electroacoustic Studies, this Specialization includes 24 credits of required upper-level courses. It is expected that applicants to this Specialization will have mastered the course content of the introductory electroacoustic course EAST 205, either at Concordia or by demonstrated ability through their application portfolio. The 60 credit Specializations in Electroacoustics are different from those in Jazz Studies, Music Composition and Music Performance in that they do not require instrumental instruction.</p> <p><b>Resource Implications:</b> None, because no new courses are being added.</p>	

**DOSSIER TITLE: MUSI-18**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM –** (please fill in all the appropriate information)

**Calendar for Academic Year:** 2019/2020

Proposed  Undergraduate or  Graduate Curriculum Changes

**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts

**Department:** MUSIC

**Program:** Specialization in Electroacoustic Recording Arts

**Degree:** BFA

**Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

- Editorial
- Requirements
- Regulations
- New Program
- Program Deletion

Present Text (Text from 20__ – 20__ Calendar)	Proposed Text
Paste description from current calendar in 'present text' ( <del>strike-out text sections to be changed or deleted</del> ) and in 'proposed text' ( <u>underline additions and changes proposed</u> ). Attach a separate sheet if necessary.	
	<p><b>60</b> <u>BFA Specialization in Electroacoustic Recording Arts</u></p> <p><u>18</u> <u>EAST 200<sup>6</sup>, 205<sup>6</sup>, 211<sup>3</sup>, MHIS 241<sup>3</sup></u></p> <p><u>18</u> <u>EAST 300<sup>6</sup>, 305<sup>6</sup>, 310<sup>6</sup></u></p> <p><u>18</u> <u>EAST 351<sup>3</sup>, 352<sup>3</sup>, 451<sup>3</sup>, 452<sup>3</sup>, 465<sup>3</sup>, 466<sup>3</sup></u></p> <p><u>6</u> <u>EAST 481<sup>3</sup>, 482<sup>3</sup>, or electives chosen from EAST</u></p>
<p><b>Rationale:</b> This Specialization is in response to generally higher skill levels in applicants, and significantly increased numbers of applicants to Electroacoustic Studies. Built upon the Major in Electroacoustic Studies, this Specialization includes 24 credits of required upper-level courses. It is expected that applicants to this Specialization will have mastered the course content of the introductory electroacoustic courses EAST 251 and 252, either at Concordia or by demonstrated ability through their application portfolio. The 60 credit Specializations in Electroacoustics are different from those in Jazz Studies, Music Composition and Music Performance in that they do not require instrumental instruction.</p>	
<p><b>Resource Implications:</b> None, because no new courses are being added.</p>	

**DOSSIER TITLE: MUSI-18**

**DESCRIPTION OF CHANGE: Program Change**

**PROGRAM CHANGE - CALENDAR UPDATE FORM – (please fill in all the appropriate information)**

Proposed  Undergraduate or  Graduate Curriculum Changes

Calendar for Academic Year: 2019/2020  
Implementation Month/Year: September 2019

Faculty: Fine Arts

Department: MUSIC

Program: Minor in Electroacoustic Studies

Degree: BFA

Section Title: 81.100

Type of Change: (please fill in all the appropriate boxes with an "X") A separate form is required for each change.

- Editorial       Requirements       Regulations
- New Program       Program Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<b>24 Minor in Electroacoustic Studies</b> 12 EAST 205 <sup>6</sup> , 305 <sup>6</sup> 6 <del>Department of Music electives</del> 6 Chosen from EAST <del>200<sup>6</sup>; EAST 211<sup>3</sup> and MHIS 241<sup>3</sup></del>	<b>24 Minor in Electroacoustic Studies</b> 6 <u>EAST 200<sup>6</sup></u> 12 EAST 205 <sup>6</sup> , 305 <sup>6</sup> 6 Chosen from EAST <u>electives</u>
<p><b>Rationale:</b> The addition of the introductory aural training course as a required course better prepares students in the Minor for further studies in music. The remaining course electives are now allowed to be selected from all other Electroacoustic Studies' courses.</p> <p><b>Resource Implications:</b> None, because EAST 200 and the electives are existing courses.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-18**  
**COURSE NUMBER: EAST 200**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020  
**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts **Department:** MUSIC

**Program:** Major and Minor in Electroacoustic Studies and Specializations in Electroacoustic Recording Arts and Creative Practices  
**Degree:** BFA **Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number  Course Title  Credit Value  Prerequisite  Course Description  
 Editorial  Other - Specify: \_\_\_\_\_  New Course  Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.	
<p><b>EAST 200 ASA and Aural Skills I</b> (6 credits)            Prerequisite: Enrolment in <del>the Major or Minor in Electroacoustic Studies</del>.            Based upon concepts articulated in Auditory Scene Analysis. This intensive fundamental ear-training course is integrated with electroacoustics and music technology through composition. It offers a focused study of sound, acoustic and psychoacoustic, designed to develop the inner and outer ear. Direct practical application studies in sonic and musical dictation and creation fosters expanded and refined hearing.  <i>NOTE: Students who have received credit for this topic under an EAMT 399 number may not take this course for credit.</i></p>	<p><b>EAST 200 ASA and Aural Skills I</b> (6 credits)            Prerequisite: Enrolment in <u>an Electroacoustic Program</u>. Based upon concepts articulated in Auditory Scene Analysis (<u>ASA</u>), <u>this</u> intensive fundamental ear-training course is integrated with electroacoustics and music technology through composition. It offers a focused study of sound, acoustic and psychoacoustic, designed to develop the inner and outer ear. Direct practical application studies in sonic and musical dictation and creation fosters expanded and refined hearing.  <i>NOTE: Students who have received credit for this topic under an EAMT 399 number may not take this course for credit.</i></p>
<p><b>Rationale:</b> Students in the new Specialization in Electroacoustic Recording Arts and the Specialization in Electroacoustic Creative Practices require this course. They need to be listed for ease of registration.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

**DOSSIER TITLE: MUSI-18**  
**COURSE NUMBER: EAST 205**  
**NEW COURSE NUMBER:**

**COURSE CHANGE - CALENDAR UPDATE FORM – A** (please fill in all the appropriate information)  
 Proposed  Undergraduate or  Graduate Curriculum Changes

**Calendar for Academic Year:** 2019/2020  
**Implementation Month/Year:** September 2019

**Faculty:** Fine Arts **Department:** (if applicable) MUSIC  
**Program:** Major and Minor in Electroacoustic Studies and the Specialization in Electroacoustic Recording Arts  
**Degree:** BFA **Section Title:** 81.100

**Type of Change:** (please fill in all the appropriate boxes with an "X") **A separate form is required for each change.**

Course Number  Course Title  Credit Value  Prerequisite  Course Description  
 Editorial  Other - Specify: Addition of NOTE  New Course  Course Deletion

Present Text (Text from 2018 – 2019 Calendar)	Proposed Text
<small>Paste description from current calendar in 'present text' (strike-out text sections to be changed or deleted) and in 'proposed text' (underline additions and changes proposed). Attach a separate sheet if necessary.</small>	
<p><b>EAST 205 <i>Electroacoustics I</i></b> (6 credits)            A seminar/workshop in electroacoustics introducing composition through <del>a series of</del> directed studies involving <del>tape editing, recording, musique concrète, processing of analog sounds, and analog synthesis. Other topics include history, acoustics and psycho-acoustics, recent technological developments, digital signal processing, computer applications, and MIDI.</del>  <i>NOTE: Students are required to bear the cost of materials.</i>  <i>NOTE: Students who have received credit for EAMT 205 may not take this course for credit.</i></p>	<p><b>EAST 205 <i>Electroacoustics I</i></b> (6 credits)  <u>Prerequisite: Enrolment in an Electroacoustic program.</u> A seminar/workshop in electroacoustics introducing composition through <u>analysis and</u> directed studies involving recording, <u>editing</u>, processing of analog and <u>digital signals, a full introduction to live and mixed electroacoustic composition, and modular analog synthesis, all in a multi-channel environment.</u>  <i>NOTE: Students are required to bear the cost of materials.</i>  <i>NOTE: Students who have received credit for EAMT 205 may not take this course for credit.</i>  <u><i>NOTE: Students in the Specialization in Electroacoustic Creative Practices may not apply this course to their concentration.</i></u></p>
<p><b>Rationale:</b>            The present description is more than 20 years old, and does not describe the course as it has been taught for the past 10-15 years. Changes reflect the need for updating and clarifying the description. There is a clarification of the prerequisite to restrict registration. This is necessitated by limited resources; classroom size, equipment and studio space. Concerning the Note, it is expected that students in this Specialization will have mastered the course content of the introductory electroacoustic course EAST 205, either at Concordia or by demonstrated ability through their application portfolio, and therefore this curriculum proposal also includes a modification to the prerequisite for EAST 305, so that students enrolled in the Specialization in Electroacoustic Creative Practices are not required to take this course prior to enrolling in EAST 305.</p> <p><b>Resource Implications:</b> None.</p> <p><b>Other Programs within which course is listed:</b> None.</p>	

\* Please attach supporting memos (Department, Faculty, Faculty Council, GCC, CSGS)

















**SENATE  
OPEN SESSION  
Meeting of September 14, 2018**

**AGENDA ITEM:** Annual report of the academic hearing panel

**ACTION REQUIRED:** For information

**SUMMARY:** The report is presented to Senate in keeping with Article 94 of the Academic Code of Conduct which stipulates:

*“An annual report detailing the number and type of charges laid under this Academic Code of Conduct and their disposition shall be prepared by the Secretary of the Tribunals and presented to Senate by September 30 of each year. The report shall be published on the University’s website. In no circumstances shall any mention be made of the names of the students involved or of any information, which might lead to their identification.”*

**PREPARED BY:**

Name: Danielle Tessier  
Date: September 7, 2018



## Office of Student Tribunals Annual Academic Hearing Report Summer 2017 to Winter 2018 terms

In accordance with Article 94 of the Academic Code of Conduct (the “Code”), this report details the number and type of charges laid under the Code and their disposition and is presented at the September meeting of Senate. In addition, enclosed herewith is a table with the breakdown of the type of charges laid under the Code (schedule A).

The specific breakdown by Faculty for 2017-2018 as at July 1, 2018 is provided below:

Faculty	INCIDENT REPORTS	CHARGES DISMISSED AT FACULTY LEVEL		CHARGES UPHELD AT FACULTY LEVEL		INCIDENT REPORTS PENDING DECISIONS BY FACULTY		TOTAL HEARING REQUESTS				TOTAL AHPs HELD		
			% of incident reports		% of incident reports		% of pending incident reports	SENT TO AHP BY FACULTY	AHP REQUESTED BY STUDENT	AHP <sup>1</sup> PENDING FROM PREVIOUS YEARS	WITH-DRAWN	DISMISSED	UPHELD	AHP PENDING
Arts and Science	205	33	16%	144	70%	28	14%	6	1	5	1	0	5	6
Engineering and Computer Science	83	13	16%	64	77%	6	7%	1	2	9	3	0	7	2
Fine Arts	7	4	57%	3	43%	0	0%	0	0	0	0	0	0	0
John Molson School of Business	125	44	35%	80	64%	1	1%	4	2	1	1	0	3	3
School of Graduate Studies	64	9	14%	52	81%	3	5%	3	5	7	3	0	7	5
<b>TOTAL</b>	<b>484</b>	<b>103</b>	<b>21%</b>	<b>343</b>	<b>71%</b>	<b>38</b>	<b>8%</b>	<b>14</b>	<b>10</b>	<b>22</b>	<b>8</b>	<b>0</b>	<b>22</b>	<b>16</b>
								<b>24</b>				<b>22</b>		

By July 1, 2018, a total of **484 incidents** were reported for courses taken during the academic period covered by this report. A total of 343 (71%) charges were upheld at the faculty level, 103 (21%) charges were dismissed, 14 files were sent directly to Academic Hearing Panels (“AHP”) and 38 (8%) of these incidents are still pending decisions by the Faculties.

<sup>1</sup> The number of hearings pending from previous years column includes hearings requested during the 2017-2018 academic year for courses taken during previous academic years.

Out of the 343 charges upheld by the Faculties, the Office of Student Tribunals received a total of 24 requests for AHPs, including 14 requests due to repeat offences. Adding the above to the 22 AHP requests carried over from previous years, there were a total of **46 AHP requests to process this past year**, including 25 for repeat offences.

Our office conducted hearings with respect to **26 cases** under the Code in the 2017-2018 academic year, as follows:

- **22 AHPs** (including 14 for repeat offence cases); and
- 4 Appeals Authorization Panels.

As of July 1, 2018, we begin the 2018-2019 academic year with 16 cases awaiting hearings under the Code, 11 of which are for repeat offences.

The hearings carried over from 2017-2018 are due to:

- 16 separate requests to postpone hearings; and
- Several hearing requests received toward the end of the 2017-2018 academic year, including 9 hearing requests received by the Office of Student Tribunals after April 1, 2018.

Submitted by Laura Landry  
Student Tribunals Officer  
[tribunal@alcor.concordia.ca](mailto:tribunal@alcor.concordia.ca)  
August 29, 2018

Encl.

Schedule A

**Breakdown from July 1, 2017 to July 1, 2018 of the type of charges laid under the Academic Code of Conduct (the "Code")**

Incident Reports filed under the Code

	Article 18	Article 19a	Article 19b	Article 19c	Article 19d	Article 19e	Article 19f	Article 19g	Article 19h	Article 19j	Article 19k
<b>Arts and Science</b>	176	46	-	22	12	1	-	41	-	-	-
<b>Engineering and Computer Science</b>	77	20	7	24	3	-	-	34	1	-	2
<b>Fine Arts</b>	-	4	-	-	2	-	-	1	-	-	-
<b>John Molson School of Business</b>	2	36	-	21	13	1	3	44	-	4	-
<b>School of Graduate Studies</b>	59	45	-	5	1	3	-	9	-	-	-
<b>TOTAL</b>	314	151	7	72	31	5	3	129	1	4	2

**Note:** See Excerpts from the Code on the following page for details about the contents of the articles listed above.  
People may have been charged under more than one article with respect to the same incident.

## **Excerpts setting forth the types of charges from the Academic Code of Conduct**

**Article 18:** "Any form of cheating, or plagiarism, as well as any other form of dishonest behaviour, intentional or not, related to the obtention of gain, academic or otherwise, or the interference in evaluative exercises committed by a student is an offence under this Code. Any attempt at or participation related in any way to an offence by a student is also an offence"

**Article 19:** "Without limiting, or restricting, the generality of Article 18 above and with the understanding that Articles 19 a) to l) are to be considered examples only, academic offences include, the carrying out, or attempting to carry out or participating in":

**19a** "plagiarism - the presentation of the work of another person, in whatever form, as one's own or without proper acknowledgement"

**19b:** "the contribution by one student to another student of work with the knowledge that the latter may submit the work in part or in whole as his or her own"

**19c:** "unauthorized collaboration between students"

**19d:** "tearing or mutilating an examination booklet or an examination paper, including, but not limited to, inserting pages into a booklet or taking a booklet or a portion of the booklet or examination paper from the examination room"

**19e:** "multiple submission - the submission of a piece of work for evaluative purposes when that work has been or is currently being submitted for evaluative purposes in another course at the University or in another teaching institution without the knowledge and permission of the instructor or instructors involved"

**19f:** "the obtention by theft or any other means or use of the questions and/or answers of an examination or of any other resource that one is not authorized to possess"

**19g:** "the possession or use during an examination of any non-authorized documents or materials or resource or possessing a device allowing access to or use of any non-authorized documents or materials"

**19h:** "the use of another person's examination during an examination"

**19j:** "impersonation - assuming the identity of another person or having another person assume one's own identity"

**19k:** "the falsification of a document, in particular a document transmitted to the University or a document of the University, whether transmitted or not to a third party, whatever the circumstances"