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SFU GRADUATE AND POSTDOCTORAL STUDIES

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MEMORANDUM

ATTENTION Senate

DATE November 14, 2019

FROM Jeff Derksen,
Chair of Senate Graduate Studies
Committee (SGSC)

RE: Program Changes

For information:

Acting under delegated authority at its meeting of November 5, 2019, SGSC approved the following program changes, effective **Summer 2020**:

Faculty of Arts and Social Sciences

School of Public Policy

1) Program change: Public Policy MPP

Faculty of Applied Sciences

School of Computing Science

2) Program change: Computer Science MSc

School of Engineering Science

3) Program change: Engineering Science MEng, MASc, and PhD

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Senate Docushare repository at https://docushare.sfu.ca/dsweb/View/Collection-12682

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SFU

FACULTY OF
ARTS AND SOCIAL SCIENCES

MEMO

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ATTENTION: Jeff Derksen, Dean
Graduate & Postdoctoral Studies

FROM : Sean Zwagerman, Chair
Faculty of Arts and Social Sciences

RE: Course changes

DATE: November 13, 2019

Dear Jeff,

The Faculty of Arts and Social Sciences has approved the following course changes effective for Summer 2020. Please include these items on the agenda for the next SGSC meeting.

~~1. **Department of Economics**~~
~~a) Course changes: ECON 750, ECON 751, ECON 752~~

~~2. **Department of Gerontology**~~
~~a) Course changes: GERO 850~~

~~3. **Department of Political Science**~~
~~a) Course changes: POL 829~~

4. **School of Public Policy**
a) Calendar revisions: Public Policy MPP
~~b) Course changes: PLCY 850~~

~~5. **Department of Urban Studies**~~
~~a) Course changes: URB 701, URB 702~~

~~Course changes: LBRL 750, LBRL 751, LBRL 752~~

Sincerely,

Sean Zwagerman
Associate Dean, Faculty of Arts and Social Sciences

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To: Associate Dean, Faculty of Arts and Social Sciences
From: Nancy Olewiler, Program Director
Re: Calendar revision and course change
Date: November 6, 2019

The School of Public Policy is submitting the following calendar revision ~~and course change~~ for approval. These curriculum items should be effective for Summer 2020.

Calendar revision: School of Public Policy
~~Course changes: PLCY 850~~

Sincerely,

Nancy Olewiler
Program Director

Calendar Entry Change for Master of Public Policy

Summary of change: To reflect PLCY 850 course title change.
Rationale for change: PLCY 850 course title change.
Effective term and year: Summer 2020
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
Program Requirements This program consists of course work, an internship, and a project for a minimum of 70 units. The research project is examined as a thesis and must be submitted to the library. Students must complete all of PLCY 800 - Introduction to Policy Issues and Analysis I (5) PLCY 801 - Economic Foundations of Policy Analysis I (5) PLCY 802 - Economic Foundations of Policy Analysis II (5) PLCY 803 - Political Foundations of Policy Analysis I (5) PLCY 804 - Political Foundations of Policy Analysis II (5) PLCY 805 - Research Techniques and Quantitative Methods I (5) PLCY 806 - Research Techniques and Quantitative Methods II (5) PLCY 807 - Introduction to Policy Analysis and Issues II (5) and ~~an internship~~ PLCY 850 – ~~Internship~~ (0) [...]	**Program Requirements** This program consists of course work, an internship, and a project for a minimum of 70 units. The research project is examined as a thesis and must be submitted to the library. Students must complete all of PLCY 800 - Introduction to Policy Issues and Analysis I (5) PLCY 801 - Economic Foundations of Policy Analysis I (5) PLCY 802 - Economic Foundations of Policy Analysis II (5) PLCY 803 - Political Foundations of Policy Analysis I (5) PLCY 804 - Political Foundations of Policy Analysis II (5) PLCY 805 - Research Techniques and Quantitative Methods I (5) PLCY 806 - Research Techniques and Quantitative Methods II (5) PLCY 807 - Introduction to Policy Analysis and Issues II (5) and a **Co-op** PLCY 850 – **Co-op (0)** [...]

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OFFICE OF THE DEAN
Faculty of Applied Sciences
Simon Fraser University

MEMORANDUM

Attention Dr. Jeff Derksen
Dean, Graduate Studies

Date Oct 15, 2019

From Dr. Parvaneh Saeedi psaeedi@sfu.ca
Faculty of Applied Science, Graduate Studies Committee

Re: FAS-CMPT and ENSC

Approved by the Faculty of Applied Sciences and sent to Senate Graduate Studies Committee for review and approval, effective Summer 2020:

School of Computing Science
1. Calendar change (Cybersecurity specialization): Computer Science, MSc
~~2. New course: CMPT 729~~

School of Engineering Science
1. Calendar Entry Change: Engineering Science MEng, MASc, and PhD
~~2. Course changes: ENSC 701, ENSC 702, ENSC 703~~

Regards,
Parvaneh Saeedi

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COMPUTING SCIENCE

MEMO

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ATTENTION	Parvaneh Saeedi, Associate Dean
FROM	Ghassan Hamarneh, Graduate Director
RE	Calendar changes and new course proposals, Professional Master of Science in Computer Science Program
DATE	September 17, 2019

Please find attached the calendar changes and new course proposals that have been approved by the School's Graduate Program Committee and presented for comment by all members of the School to be effective as of Summer 2020.

Summary and Rational for the new specialization:
The existing Master of Science in Computer Science Program currently offers two specializations: Big Data and Visual Computing. The scope of this program is expanded by adding Cybersecurity as a third specialization. In addition to two new lab courses for students in the cybersecurity specialization, Cybersecurity Lab 1 and Cybersecurity Lab 2, seven new courses focusing on core aspects of cybersecurity will be introduced. All of these seven courses are available to students regardless of their specialization; vice versa, students in the cybersecurity specialization can take any of the already existing courses as electives, except for the lab courses in Big Data and Visual Computing. Mandatory courses for the cybersecurity specialization are Machine Learning, Cybersecurity Lab 1 & 2 and Applied Cryptography. Certain courses are recommended for students in each specialization as a guideline.

Cybersecurity is an interdisciplinary field of study and research, partly building on classical information security, risk management, situation analysis, data analytics, cyber forensics and several other areas. While the broader scope is interdisciplinary, the core is fundamentally a computing-based discipline involving technology, people, information, and processes to enable assured operations in the context of adversaries. Responding to the dramatic shortage of cybersecurity professionals projected by the Information Security Branch -

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COMPUTING SCIENCE

Government of BC, the Communications Security Establishment - Government of Canada, Deloitte, Gartner and other trusted sources, there is a strong motivation for the School of Computing Science to expand their existing Master of Science in Computer Science Program by offering a specialization in cybersecurity. Expected enrollment numbers for the Cybersecurity specialization are comparable to what has been seen for Big Data.

Additional changes clarify the CGPA requirement to remain in the program and the co-op requirements and options.

~~NEW COURSE PROPOSALS – effective Summer 2020~~

~~CMPT 780 – Computer Security and Ethics~~
~~CMPT 782 – Cybersecurity Lab 1~~
~~CMPT 783 – Cybersecurity Lab 2~~
~~CMPT 784 – Cyber Risk Assessment and Management~~
~~CMPT 785 – Secure Software Design~~
~~CMPT 786 – Cloud and Network Security~~
~~CMPT 787 – Ethical Hacking~~
~~CMPT 788 – Information Privacy~~
~~CMPT 789 – Applied Cryptography~~

If you have any questions or concerns, please let me know.

Ghassan Hamarneh
Graduate Chair, School of Computing Science

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SFU FACULTY OF ARTS AND SOCIAL SCIENCES | SCHOOL OF CRIMINOLOGY

OFFICE OF THE DIRECTOR
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ATTENTION Professor Uwe Glässer, Computing Science | TEL

FROM Bryan Kinney, Acting Director, School of Criminology

RE Professional Master of Science in Computer Science program

DATE September16, 2019

Dear Prof. ~~Glässer~~ UWE

This memo summarizes our discussions from our person meeting (Sept 5, 2019). At that time, we discussed the possibility of overlap with the School of Criminology re: Computing Science's proposed additions to an existing Professional Master of Science in Computer Science program, namely a specialisation in cyber security. Present at that meeting was Associate Professor Richard Frank, the School's primary connection between our schools, and our specialist in cyber and computer-related crime.

In short, we concluded that there was no overlap of services/content, etc. and further, the School of Criminology supports the addition of a Cyber Security specialisation housed in Computing Science. We also discussed the value added to each of our schools, and the potential for Criminology faculty to participate in this new specialisation.

We in Criminology see substantial opportunity for joint work, not only in the classroom, but for co-support in graduate theses supervision, 'internal' external examiners roles for faculty, and research partnerships for students in both programmes. There are, as you know, a range of excellent research collaboration opportunities that also fall from such a relationship, including an expansion of our already productive work in the Institute for Canadian Urban Research Studies (ICURS) where I serve as Director.

Please advise if there is anything I can add; I understand the tight timelines for materials submissions, etc. and remain available moving forward on this exciting opportunity.

Respectfully Yours,

Bryan Kinney

Master of Science in Computer Science

Summary of change: The existing Master of Science in Professional Computer Science program currently offers two specializations: Big Data and Visual Computing. The scope of this program is expanded by adding Cybersecurity as a third specialization. In addition to two new lab courses for students in the cybersecurity specialization, Cybersecurity Lab 1 and Cybersecurity Lab 2, seven new courses focusing on core aspects of cybersecurity will be introduced. All of these seven courses are available to students regardless of their specialization; vice versa, students in the cybersecurity specialization can take any of the already existing courses as electives, except for the lab courses in Big Data and Visual Computing. *Summary of additional changes:* (1) Reminder that a 3.0 CGPA is required in order to remain in the program. (2) Remove CMPT 894 from the allowed curriculum. (3) Add the information that co-op is competitive and a student may not be able to secure a co-op. (4) Students, who do not secure a co-op after their second attempt must complete additional course work and a graduate project.
Rationale for change: Cybersecurity is an interdisciplinary field of study and research, partly building on classical information security, risk management, situation analysis, data analytics, cyber forensics and several other areas. While the broader scope is interdisciplinary, the core is fundamentally a computing-based discipline involving technology, people, information, and processes to enable assured operations in the context of adversaries. Responding to the dramatic shortage of cybersecurity professionals projected by the Information Security Branch - Government of BC, the Communications Security Establishment - Government of Canada, Deloitte, Gartner and other trusted sources, there is a strong motivation for the School of Computing Science to expand their existing Professional Computer Science program by offering a specialization in cybersecurity. Expected enrollment numbers for the cybersecurity specialization are comparable to what has been seen for Big Data. *Rationale for additional changes:* For our Fall 2018 intake of students, we had a number of students who did not secure a co-op. We are now formalizing this process so that there is clarity for students and administrators; as well, we are indicating that students will be given a second attempt at a co-op for their 2nd Fall semester before being required to complete a graduate project.
Effective term and year: Summer 2020
Will this change impact current students? If yes, what is the plan for current students? The additional changes will affect the Fall 2019 new students as students will be able to elect into the new requirements.

FROM	TO
MASTER OF SCIENCE The ~~Professional Master's program in Computer Science~~ engages students in developing deep knowledge and practical skills in specialized areas of computer science. The program trains computational specialists who can construct models, develop algorithms, and write software using state-of-the-art graduate-level knowledge and techniques. Students take instructional and lab courses, in a cohort, and complete ~~work placement~~ through SFU's co-op program, allowing them to tackle real-world scientific, engineering, and ~~social-economical~~ problems and gain valuable project management experiences while expanding their network of industrial contacts. This full-time ~~Master's~~ program/specializations are suitable for students with a strong aptitude ~~in~~ computer science, or other quantitative fields, such as engineering and mathematics. ## Admission Requirements [...] For further information on conditional or qualifying admission requirements, please contact ~~Visual Computing Specialization or Big Data Specialization~~. ## Program Requirements This program consists of ~~core~~ course~~s~~, co-op, and a choice of specialization ~~in big data or visual computing~~ for minimum of 30 units.	MASTER OF SCIENCE The **Master of Science in Professional Computer Science Program** engages students in developing deep knowledge and practical skills in specialized areas of computer science. The program trains computational specialists who can construct models, develop algorithms, and write software using state-of-the-art graduate-level knowledge and techniques. Students take instructional and lab courses, in a cohort, and complete a **co-op** through SFU's co-op program, allowing them to tackle real-world scientific, engineering, and **socioeconomic** problems and gain valuable project management experiences while expanding their network of industrial contacts. This full-time **master's** program/specializations are suitable for students with a strong aptitude **for** computer science, or other quantitative fields, such as engineering and mathematics. ## Admission Requirements [...] For further information on conditional or qualifying admission requirements, please contact **the Program Coordinator**. ## Program Requirements This program consists of course **work**, co-op, **or graduate project**, and a choice of specialization for **a** minimum of 30 units.

Students complete ~~all of~~ CMPT 726 - Machine Learning (3) and one of CMPT 705 - Design and Analysis of Algorithms (3) CMPT 706 - Design and Analysis of Algorithms for Big Data (3) * CMPT 757 - Frontiers of Visual Computing (3) ** CMPT 813 - Computational Geometry (3) and at least two of CMPT 741 - Data Mining (3) * CMPT 756 - Systems For Big Data (3) * CMPT 764 - Geometric Modelling in Computer Graphics (3) ** CMPT 767 - Visualization (3) CMPT 820 - Multimedia Systems (3) CMPT 822 - Computational Vision (3) ** CMPT 825 - Natural Language Processing (3) STAT 852 - Modern Methods in Applied Statistics (4) IAT 814 - Visualization and Visual Analytics (3) and one of CMNS 815 - Social Construction of Communication Technologies (5) CMPT 829 - Special Topics in Bioinformatics (3) CMPT 886 - Special Topics in Operating Systems (3) CMPT 889 - Special Topics in Interdisciplinary Computing (3) ~~CMPT 894 - Directed Reading (3)~~ CMPT 980 - Special Topics in Computing Science (3) CMPT 981 - Special Topics in Theoretical Computing Science (3)	**The program requires students to maintain a minimum 3.0 CGPA throughout their graduate career.** Students complete CMPT 726 - Machine Learning (3) and one of CMPT 705 - Design and Analysis of Algorithms (3) CMPT 706 - Design and Analysis of Algorithms for Big Data (3) * CMPT 757 - Frontiers of Visual Computing (3) ** CMPT 813 - Computational Geometry (3) **CMPT 780 - Computer Security and Ethics (3) ***** and at least two of CMPT 741 - Data Mining (3) * CMPT 756 - Systems For Big Data (3) * CMPT 764 - Geometric Modelling in Computer Graphics (3) ** CMPT 767 - Visualization (3) CMPT 820 - Multimedia Systems (3) CMPT 822 - Computational Vision (3) ** CMPT 825 - Natural Language Processing (3) STAT 852 - Modern Methods in Applied Statistics (4) IAT 814 - Visualization and Visual Analytics (3) **CMPT 784 - Cyber Risk Assessment and Management (3) ***** **CMPT 785 - Secure Software Design (3) ***** **CMPT 786 - Cloud and Network Security (3) ***** **CMPT 787 - Ethical Hacking (3) ***** **CMPT 788 - Information Privacy (3) ***** **CMPT 789 - Applied Cryptography (3) ***** and one of

CMPT 982 - Special Topics in Networks and Systems (3) CMPT 983 - Special Topics in Artificial Intelligence (3) CMPT 984 - Special Topics in Databases, Data Mining, Computational Biology (3) CMPT 985 - Special Topics in Graphics, HCI, Visualization, Vision, Multimedia (3) ** and a minimum of one co-op term ~~CMPT 626 - Graduate Co-op Practicum~~ I (3) BIG DATA SPECIALIZATION Students complete all of the above requirements and both of CMPT 732 - Programming for Big Data 1 (6) CMPT 733 - Programming for Big Data 2 (6) or VISUAL COMPUTING SPECIALIZATION Students complete all of the above requirements and both of CMPT 742 - Practices in Visual Computing I (6) CMPT 743 - Practices in Visual Computing II (6) * Recommended for students in the Big Data Specialization ** Recommended for students in the Visual Computing Specialization	CMNS 815 - Social Construction of Communication Technologies (5) CMPT 829 - Special Topics in Bioinformatics (3) CMPT 886 - Special Topics in Operating Systems (3) CMPT 889 - Special Topics in Interdisciplinary Computing (3) CMPT 980 - Special Topics in Computing Science (3) CMPT 981 - Special Topics in Theoretical Computing Science (3) CMPT 982 - Special Topics in Networks and Systems (3) CMPT 983 - Special Topics in Artificial Intelligence (3) CMPT 984 - Special Topics in Databases, Data Mining, Computational Biology (3) CMPT 985 - Special Topics in Graphics, HCI, Visualization, Vision, Multimedia (3) ** and a minimum of one co-op **or graduate project** CMPT 626 - Graduate Co-op I (3) **CMPT 629 – Graduate Project (3)** BIG DATA SPECIALIZATION Students complete all of the above requirements and both of CMPT 732 - Programming for Big Data 1 (6) CMPT 733 - Programming for Big Data 2 (6) or VISUAL COMPUTING SPECIALIZATION Students complete all of the above requirements and both of

	CMPT 742 - Practices in Visual Computing I (6) CMPT 743 - Practices in Visual Computing II (6) **or** **CYBERSECURITY SPECIALIZATION** **Students complete all of the above requirements and both of** **CMPT 782 – Cybersecurity Lab 1 (6)** **CMPT 783 – Cybersecurity Lab 2 (6)**
Co-op A co-op ~~internship~~ is an integral part of this program~~. Students will register for one or two co-op terms. The latter option is in place to satisfy requests from our industrial partners. Some industrial partners prefer two co-op terms for better continuity since one term may not offer sufficient time to carry out a large-scale project.~~ With assistance from the co-op coordinator for this program, students will be expected to find a suitable industry partner ~~for the co-op~~ ~~placement~~. ~~The student may instead choose to conduct research into big data at one of the various research labs in the School of Computing Science as a paid research assistant to satisfy their co-op requirement. In extenuating circumstances, a student may appeal to the program director to take an elective course from the list of electives for this program instead of a co-op term.~~ ~~Students are required to enroll in at least one of the program courses in the term following the co-op term(s).~~	* Recommended for students in the Big Data Specialization ** Recommended for students in the Visual Computing Specialization *****Recommended for students in the Cybersecurity Specialization** **Co-op** **All students are required to apply for a co-op. With assistance from the co-op coordinator for this program, students will be expected to find a suitable industry partner. Students may complete one or two terms of co-op. The latter option is in place to satisfy requests from our industrial partners for continuity and to carry out a large-scale project. Students are required to enroll in at least one of the program courses in the term following their co-op.** **A co-op is an integral part of this program, however, it is offered on a competitive basis.** **In the event that a student is unable to secure a co-op during the summer term, they will be required to go on academic break since no courses will be offered. The**

	student will be able to apply for a co-op in the subsequent term or, if unsuccessful, will be required to undertake additional course work. In consultation with the program director, the student may complete a graduate project in their final term to fulfill program requirements.

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SCHOOL OF
ENGINEERING SCIENCE

School of Engineering Science
Simon Fraser University

8888 University Drive
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October 24, 2019

Graduate and Postdoctoral Studies
SFU

Re: Calendar Entry Changes For ENSC PhD and MASc Programs

Dear GPS,

Due to recent changes to our graduate co-op program and the relevant courses, we need to modify the calendar entry descriptions of our PhD and MASc programs to reflect the fact that the previous co-op courses ENSC-701, 702, and 703 are replaced by the new course ENSC-704 Industrial Internship.

Best regards,

Jie Liang
Professor, PhD, Peng
Graduate Program Chair
School of Engineering Science, Simon Fraser University
8888 University Drive, Burnaby, BC, V5A 1S6, Canada
Phone: 778-782-5484, Fax: 778-782-4951
Email: jiel@sfu.ca, URL: www.sfu.ca/~jiel

Calendar Entry Change for Master of Engineering

FROM	TO
[...] Program Requirements This program consists of required courses and elective courses for a minimum of 30 units. Students complete the following ENSC 820 - Engineering Management for Development Projects (3) and 12 units of ENSC graduate courses (excluding ~~ENSC 701, ENSC 702, ENSC 703~~, ENSC 803, ENSC 820, ENSC 891, ENSC 892, ENSC 896, ENSC 897, ENSC 898, ENSC 899) and 15 units of additional graduate courses (any graduate courses from ENSC or up to 9 units from other departments in the Faculty of Applied Sciences or the Faculty of Science; ~~ENSC 703 cannot be used towards this requirement~~). The following courses can be used towards the 15 units of graduate courses: ~~ENSC 701 - Graduate Co-op Practicum I (3)~~ ~~ENSC 702 - Graduate Co-op Practicum II (3)~~ ENSC 891 - Directed Studies I (3) ENSC 892 - Directed Studies II (3) ENSC 897 - MEng Project (6) [...]	[...] Program Requirements This program consists of required courses and elective courses for a minimum of 30 units. Students complete the following ENSC 820 - Engineering Management for Development Projects (3) and 12 units of ENSC graduate courses (excluding **ENSC 704**, ENSC 803, ENSC 820, ENSC 891, ENSC 892, ENSC 896, ENSC 897, ENSC 898, ENSC 899) and 15 units of additional graduate courses (any graduate courses from ENSC or up to 9 units from other departments in the Faculty of Applied Sciences or the Faculty of Science; **ENSC 704 can be taken twice and counted towards this requirement**). The following courses can be used towards the 15 units of graduate courses: **ENSC 704 – Industrial Internship (3)** ENSC 891 - Directed Studies I (3) ENSC 892 - Directed Studies II (3) ENSC 897 - MEng Project (6) [...]

[...] **Other Information** International Students International MEng students with a study permit should register in at least two courses each term with a total of six or more units to maintain full-time status. [...]	[...] **Other Information** International Students International MEng students with a study permit should register in at least two courses each term with a total of six or more units to maintain full-time status. **Industrial Internship** **The industrial internship is considered a course and will be charged at the per unit rate for the program. Approval of supervisor and a GPC representative is required prior to applying for, and accepting an internship.** [...]

Calendar Entry Change for [Engineering Science (Master of Applied Science)]

Summary of change: We must update the program description to substitute the co-op with the Industrial Internship.
Rationale for change: The calendar description must be updated so it would be in line with the exact program currently offered.
Effective term and year: Summer 2020
Will this change impact current students? If yes, what is the plan for current students? Yes. We have been communicating with the students to let them know about the changes.

FROM	TO
[...] **Program Requirements** This program consists of course work and a thesis for a minimum of 30 units. The courses will normally be selected in consultation with the senior supervisor. ENSC 820 may not be used towards the MASc course requirements. Additional courses may be required to correct deficiencies in the student's background. If the subject matter of a required course has been previously completed for credit, the course may not be completed again for credit. Students must complete a minimum of six units of ENSC graduate courses (excluding ~~ENSC 701, ENSC 702, ENSC 703,~~ ENSC 803, ENSC 820, ENSC 891, ENSC 892, ENSC 896, ENSC 897, ENSC 898, ENSC 899)	[...] **Program Requirements** This program consists of course work and a thesis for a minimum of 30 units. The courses will normally be selected in consultation with the senior supervisor. ENSC 820 may not be used towards the MASc course requirements. Additional courses may be required to correct deficiencies in the student's background. If the subject matter of a required course has been previously completed for credit, the course may not be completed again for credit. Students must complete a minimum of six units of ENSC graduate courses (excluding **ENSC 704**, ENSC 803, ENSC 820, ENSC 891, ENSC 892, ENSC 896, ENSC 897, ENSC 898, ENSC 899)

a minimum of six units of additional graduate courses (at most three units may be directed studies or ~~graduate co-op~~) and a thesis ENSC 898 - MASc Thesis (18) NOTE: SFU students enrolled in the Accelerated Master's program within School of Engineering Science, Faculty of Applied Science, may apply a maximum of 10 graduate course units, taken while completing the bachelor's degree, towards the upper division undergraduate electives of the bachelor's program and the requirements of the master's degree. For more information, please contact the Engineering Science Graduate Program Committee Chair. [...]	a minimum of six units of additional graduate courses (at most three units may be directed studies or **Industrial Internship)** and a thesis ENSC 898 - MASc Thesis (18) NOTE: SFU students enrolled in the Accelerated Master's program within School of Engineering Science, Faculty of Applied Science, may apply a maximum of 10 graduate course units, taken while completing the bachelor's degree, towards the upper division undergraduate electives of the bachelor's program and the requirements of the master's degree. For more information, please contact the Engineering Science Graduate Program Committee Chair. [...]

Calendar Entry Change for [Engineering Science /DOCTOR OF PHILOSOPHY]

Summary of change: We must update the program description to substitute the co-op with the Industrial Internship.
Rationale for change: The calendar description must be updated so it would be in line with the exact program currently offered.
Effective term and year: Summer 2020
Will this change impact current students? If yes, what is the plan for current students? Yes. We have been communicating with the students to let them know about the changes.

FROM	TO
[...] Program Requirements This program consists of 18 units of course work, a qualifying examination, and a thesis. Additional courses may be required to correct deficiencies in the student's background. If the subject matter of a listed course has been previously completed with graduate credit, the course may not be completed again for credit. Students must complete a minimum of 18 units of coursework beyond the MASc degree, including six units of ENSC graduate courses (excluding ~~ENSC 701, ENSC 702, ENSC 703,~~ ENSC 803, ENSC 820, ENSC 891, ENSC 892, ENSC 896, ENSC 897, ENSC 898, ENSC 899) and 12 units of additional courses subject to the following rules	[...] Program Requirements This program consists of 18 units of course work, a qualifying examination, and a thesis. Additional courses may be required to correct deficiencies in the student's background. If the subject matter of a listed course has been previously completed with graduate credit, the course may not be completed again for credit. Students must complete a minimum of 18 units of coursework beyond the MASc degree, including six units of ENSC graduate courses (excluding **ENSC 704**, ENSC 803, ENSC 820, ENSC 891, ENSC 892, ENSC 896, ENSC 897, ENSC 898, ENSC 899) and 12 units of additional courses subject to the following rules

At most six of these units can be for a senior ENSC undergraduate courses not previously taken for credit At most six units can be for directed studies ~~ENSC 701 - Graduate Co-op Practicum I (3)~~ can be used towards the degree requirement, in which case at most three units of directed studies can be taken ENSC 803 cannot be used towards the degree requirement and a qualifying exam ENSC 880 - PhD Qualifying Examination (0) and a thesis ENSC 899 - PhD Thesis (6) [...]	At most six of these units can be for a senior ENSC undergraduate courses not previously taken for credit At most six units can be for directed studies **ENSC 704 Industrial Internship (3)** can be used towards the degree requirement, in which case at most three units of directed studies can be taken ENSC 803 cannot be used towards the degree requirement and a qualifying exam ENSC 880 - PhD Qualifying Examination (0) and a thesis ENSC 899 - PhD Thesis (6) [...]