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# AGENDA



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Go far,  
together.

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## EXECUTIVE OF COUNCIL

**Date:** 20 September 2023  
**To:** Executive of Council  
**From:** Glenys Sylvestre, University Secretary  
**Re:** Meeting of 27 September 2023

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A meeting of Executive of Council is scheduled for 27 September 2023, 2:30-4:30 p.m. in the Administration Humanities Building, Room 527 (AH 527) and via web conferencing (Zoom). As per Section 4.6.2 of the Council Rules and Regulations, meetings shall be closed except to persons invited to attend and members of Council who chose to attend as guests.

### AGENDA

1. **Approval of the Agenda**
2. **Approval of the Minutes of 21 June 2023 – Circulated with the Agenda**
3. **Business Arising from the Minutes**
4. **Remarks from the Chair**
5. **Report from the University Secretary**
6. **Report from Committees of Council**
  - 6.1 Council Committee on the Faculty of Graduate Studies and Research and Council Committee on Undergraduate Admissions and Studies, Appendix I, pp. 3-5
  - 6.2 Council Committee on the Faculty of Graduate Studies and Research, Appendix II, pp. 6-17
  - 6.3 Faculty of Graduate Studies and Research Scholarships and Awards Committee, *Distributed Confidentially*
  - 6.4 Council Committee on Undergraduate Awards, *Distributed Confidentially*
7. **Graduand Lists**
  - 7.1 Graduand Lists for Approval – Omnibus Motion – *Distributed Confidentially*
    - 7.1.1 Faculty of Arts
    - 7.1.2 Faculty of Business Administration
    - 7.1.3 Faculty of Education
    - 7.1.4 Faculty of Engineering and Applied Science
    - 7.1.5 Faculty of Graduate Studies and Research

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# AGENDA



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- 7.1.6 Faculty of Kinesiology and Health Studies
  - 7.1.7 Faculty of Media, Art, and Performance
  - 7.1.8 Faculty of Nursing
  - 7.1.9 Faculty of Science
  - 7.1.10 Faculty of Social Work
  - 7.1.11 La Cité universitaire francophone
  - 7.1.12 Centre for Continuing Education

**8. Other Business**

**9. Adjournment**

**UNIVERSITY OF REGINA**  
Executive of Council

**Subject:** Report from the Council Committee on the Faculty of Graduate Studies and Research and the Council Committee on Undergraduate Admissions and Studies

**Item(s) for Decision:**

**1. 2025-2026 Academic Schedule**

**MOTION:** To approve the 2025-2026 Academic Schedule.

**Rationale:**

The Academic Schedule (*Attachment A*) is brought forward for approval. The Other Important Dates chart is included for information (*Attachment B*).

The schedule was approved by the Council Committee on Undergraduate Admissions and Studies on June 1, 2023 and approved by the Council Committee on the Faculty of Graduate Studies and Research on September 14, 2023.

(end of Motion)

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## 2025-2026 Academic Schedule

### Attachment A

19-Sep-2023

Term Information	Spring/Summer 2025								Fall 2025	Winter 2026
Part of term (POT):	1	2	3	4	5	6	7	10	1	1
<b>Held in:</b>	May-Aug	May	June	May-June	July	August	July-Aug	May-Aug	Sep-Dec	Jan-Apr
Start of term	5-May-25	5-May-25	5-May-25	5-May-25	5-May-25	5-May-25	5-May-25	5-May-25	2-Sep-25	6-Jan-26
End of term	29-Aug-25	29-Aug-25	29-Aug-25	29-Aug-25	29-Aug-25	29-Aug-25	29-Aug-25	29-Aug-25	22-Dec-25	29-Apr-26
<b>Class Dates</b>										
Start of classes	5-May-25	5-May-25	2-Jun-25	5-May-25	2-Jul-25	5-Aug-25	2-Jul-25	5-May-25	2-Sep-25	6-Jan-26
End of classes	20-Aug-25	27-May-25	23-Jun-25	18-Jun-25	23-Jul-25	26-Aug-25	18-Aug-25	31-Jul-25	5-Dec-25	13-Apr-26
<b>Examination Dates</b>										
Start of examination period	25-Aug-25	30-May-25	26-Jun-25	21-Jun-25	26-Jul-25	29-Aug-25	20-Aug-25	5-Aug-25	9-Dec-25	16-Apr-26
End of examination period	27-Aug-25	30-May-25	26-Jun-25	25-Jun-25	26-Jul-25	29-Aug-25	23-Aug-25	9-Aug-25	22-Dec-25	29-Apr-26
<b>Tuition and Fee Payment Dates</b>										
Due date for tuition and fee payment	5-May-25	5-May-25	2-Jun-25	5-May-25	2-Jul-25	5-Aug-25	2-Jul-25	5-May-25	2-Sep-25	6-Jan-26
End of penalty-free payment period	9-Jun-25	2-Jun-25	30-Jun-25	2-Jun-25	31-Jul-25	1-Sep-25	31-Jul-23	30-May-25	29-Sep-25	2-Feb-26
<b>Class Add/Drop Dates</b>										
End course-add period	21-May-25	6-May-25	3-Jun-25	8-May-25	3-Jul-25	6-Aug-25	8-Jul-25	16-May-25	15-Sep-25	19-Jan-26
End of no-record drop period	21-May-25	6-May-25	3-Jun-25	8-May-25	3-Jul-25	6-Aug-25	8-Jul-25	16-May-23	15-Sep-25	19-Jan-26
End of grade-of-W drop period	17-Jul-25	20-May-25	16-Jun-25	4-Jun-25	16-Jul-25	19-Aug-25	31-Jul-25	4-Jul-25	17-Nov-25	16-Mar-26
<b>Tuition and Fee Refund Dates</b>										
End of 100% refund period	21-May-25	6-May-25	3-Jun-25	8-May-25	3-Jul-25	6-Aug-25	8-Jul-25	16-May-25	15-Sep-25	19-Jan-26
End of 50% refund period	9-Jun-25	8-May-25	5-Jun-25	15-May-25	8-Jul-25	11-Aug-25	15-Jul-25	2-Jun-25	29-Sep-25	2-Feb-26

## Attachment B

## Other Important Dates

2025

19-Sep-2023

Occasion	Date
Victoria Day - No classes (Most university offices closed)	May 19
Spring Convocation	June 11, 12, & 13
Canada Day - No classes (Most university offices closed)	July 1
Last day to apply to graduate for Fall Convocation	July 31
Saskatchewan Day - No classes (Most university offices closed)	August 4
Undergraduate Student Orientation	August 29
Labour Day - No classes (Most university offices closed)	September 1
Truth and Reconciliation Day - No classes (Most university offices closed)	September 30
Thanksgiving Day - No classes (Most university offices closed)	October 13
Fall Break starts (Monday)	October 13
Fall Break ends (Sunday)	October 19
Fall Convocation (Thursday)	October 16
Remembrance Day (Most university offices closed)	November 11
Faculty and Admin Offices close at 4:30 p.m.	December 23

2026

Occasion	Date
Faculty and Admin Offices open at 8:15 a.m.	January 2
Undergraduate Student Orientation	January 5
Last day to apply to graduate for Spring Convocation	January 31
Family Day - No classes (Most university offices closed)	February 16
Winter Break starts (Monday)	February 16
Winter Break ends (Sunday)	February 22
Good Friday	April 3

## Application Deadlines

Information about applying to the University of Regina, including application deadlines, can be found in the [Undergraduate Admissions](#) section of this Calendar.



Candidates for the MA degree in Canadian History may submit their thesis in either French or English.	Candidates for the MA degree in Canadian History may submit their thesis in either French or English.
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**Rationale:**

Over the past 5-10 years, the MA program has been transitioning from an “area studies” model toward a more thematic model in terms of graduate course offerings and thesis supervision. This transition both reflects changes in the discipline of History as a whole and the changing specializations and approaches of the faculty. For example, in addition to offering courses focused on Canadian history or British history, they are now also offering thematic courses such as Theories of History, Methodologies, and Doing Women’s and Gender History. Such offerings are arguably applicable to all students and therefore the “inside” and “outside” designations are becoming less relevant.

The Department also does not have the resources to offer courses in areas that would suit all of their individual students. For example, one student is currently writing a thesis on portrayals of background characters in classics based video games. A classics course would fit this student, but the Department does not have a classics graduate course. Therefore, by removing the “inside” and “outside” designations, the student is able to take enough courses to satisfy their degree offerings.

Further, in the next few years the Department will be transitioning toward a course-based MA. This program will be better suited to the Department, which is shrinking in terms of its graduate teaching faculty due to ongoing retirements and the subsequent closure of tenure lines. Since those retirements may not be replaced, the Department is adjusting its graduate program accordingly.

(end of Motion)

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## 2. FACULTY OF BUSINESS ADMINISTRATION

### 2.1 Discontinue Program – Post Graduate Diploma in Business Foundations

<b>MOTION:</b> That the Post-Graduate Diploma in Business Foundations be discontinued, effective immediately.
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**Rationale:**

The program is no longer offered and was suspended in 202030 and there are no students enrolled in it.

(end of Motion)

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## 2.2 Program Changes – Master’s Certificate Programs, Master of Administration in Leadership, Master of Human Resource Management, and Master of Business Administration

**MOTION:** That the admission requirements for the mid-career option for the following programs be changed, effective 202420.

- Master’s Certificate Programs (Human Resource Management, Organizational Leadership, Project Management, Labour Relations)
- Master of Administration in Leadership (M.Admin – Leadership)
- Master of Human Resource Management (MHRM)
- Master of Business Administration (MBA)

### Master’s Certificate Programs (Human Resource Management; Organizational Leadership; Project Management; Labour Relations)

<https://www.uregina.ca/gradstudies/future-students/programs/administration.html#Certificate>

Current	Proposed
<p><b>Mid-Career Option</b> A limited number of mid-career managers with at least 7 years work experience, but who lack an undergraduate degree, may be admitted to the Master’s Certificate program. Mid-career managers must meet the Master’s Certificate qualifying course requirements before beginning graduate courses, if they have not been completed prior to acceptance. <del>These</del> qualifying course requirements consist of ten (10) undergraduate courses. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from their program if they receive one grade less than 70%. Mid-career managers who plan to take qualifying courses should consult with the Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p>	<p><b>Mid-Career Option</b> A limited number of mid-career managers with at least 7 years work experience, but who lack an undergraduate degree, may be admitted to the Master’s Certificate program. Mid-career managers must meet the Master’s Certificate qualifying course requirements before beginning graduate courses, if they have not been completed prior to acceptance, <b>or have achieved a minimum GMAT (or GRE equivalent) score of 500.</b> The qualifying course requirements consist of ten (10) undergraduate courses. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from their program if they receive one grade less than 70%. Mid-career managers who plan to take qualifying courses should consult with the Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p>

#### Rationale:

In order to more appropriately recognize and account for the value of prior learning of individuals with extensive work experience, we added the GMAT/GRE exam as another option for the mid-career path. This additional requirement ensures the academic readiness of applicants who do not have the current ten undergraduate courses. It is an appropriate balance of ensuring academic readiness to graduate level standards and it creates pathways that recognize prior learning through relevant work experience.



**Master of Administration in Leadership (M.Admin – Leadership)**

<https://www.uregina.ca/gradstudies/future-students/programs/administration.html#MAdmin>

Current	Proposed
<p><b>Mid-Career Option</b> A limited number of mid-career managers with at least 7 years work experience, but who lack an undergraduate degree, may be admitted to the MAdmin program. Mid-career managers must meet the degree's qualifying course requirements before beginning graduate courses, if they have not completed prior to acceptance. <del>These</del> qualifying course requirements are ten (10) undergraduate courses. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from the program if they receive one grade less than 70%. Mid-career managers who plan to take qualifying courses should consult with a Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p>	<p><b>Mid-Career Option</b> A limited number of mid-career managers with at least 7 years work experience, but who lack an undergraduate degree, may be admitted to the MAdmin program. Mid-career managers must meet the degree's qualifying course requirements <b>or have achieved a minimum GMAT (or GRE equivalent) score of 500</b> before beginning graduate courses, if they have not completed prior to acceptance. <b>The</b> qualifying course requirements are ten (10) undergraduate courses. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from the program if they receive one grade less than 70%. Mid-career managers who plan to take qualifying courses should consult with a Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p> <p><b><i>* Students entering with a Master's Certificate from the Levene School are not required to submit the results of an additional GMAT/GRE exam.</i></b></p>

**Master of Human Resource Management (MHRM)**

<https://www.uregina.ca/gradstudies/future-students/programs/administration.html#MHRM>

Current	Proposed
<p><b>Mid-Career Option</b> A limited number of mid-career managers with at least 7 years work experience but who lack an undergraduate degree, may be admitted to the MHRM program. Mid-career managers must meet the degree's qualifying course requirements before beginning graduate courses, if they have not been completed prior to acceptance. <del>These</del> qualifying course requirements are ten (10) undergraduate courses. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from their program if they receive one grade less than 70%. Mid-career managers who plan to take qualifying courses should consult with a Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p>	<p><b>Mid-Career Option</b> A limited number of mid-career managers with at least 7 years work experience but who lack an undergraduate degree, may be admitted to the MHRM program. Mid-career managers must meet the degree's qualifying course requirements <b>or have achieved a minimum GMAT (or GRE equivalent) score of 500</b> before beginning graduate courses, if they have not been completed prior to acceptance. <b>The</b> qualifying course requirements are ten (10) undergraduate courses. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from their program if they receive one grade less than 70%. Mid-career managers who plan to take qualifying courses should consult with a Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p> <p><b><i>* Students entering with a Master's Certificate from the Levene School are not required to submit the results of an additional GMAT/GRE exam.</i></b></p>

**Master of Business Administration (MBA)**

<https://www.uregina.ca/gradstudies/future-students/programs/administration.html#MBA>

Current	Proposed
<p><b>Mid-Career Option</b> A number of individuals with at least 7 years suitable work experience, but who lack an undergraduate degree, may be admitted to the Levene MBA <del>with Specialization</del>. These individuals must meet the degree's qualifying course requirements before beginning <del>graduate courses</del>, if they have not completed prior to acceptance, or the Post Graduate Diploma. <del>These</del> qualifying course requirements are ten (10) undergraduate courses and the GMAT score of 500 or GRE equivalent. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from the program if they receive one grade less than 70%. Individuals who plan to take qualifying courses should consult with a Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p> <p><del>Note: Admissions to the Levene MBA Public Safety, International Management, and Engineering Management specializations are currently suspended.</del></p> <p>***A small number of students, with a GPA of 80% and GMAT score over 600 (or GRE equivalent), may be admitted without the required two years of work experience.</p>	<p><b>Mid-Career Option</b> A number of individuals with at least 7 years suitable work experience, but who lack an undergraduate degree, may be admitted to the Levene MBA. These individuals must meet the degree's qualifying course requirements <b>or have completed a Master's Certificate program</b> before beginning <b>the Levene MBA program</b>, if they have not completed prior to acceptance, or the Post Graduate Diploma. <b>The</b> qualifying course requirements are ten (10) undergraduate courses and the GMAT score of 500 or GRE equivalent. All qualifying courses must be passed with a grade no less than 70%. Qualifying students may be discontinued from the program if they receive one grade less than 70%. Individuals who plan to take qualifying courses should consult with a Graduate Advisor in the Faculty of Business Administration to choose suitable courses.</p> <p>***A small number of students, with a GPA of 80% and GMAT score over 600 (or GRE equivalent), may be admitted without the required two years of work experience.</p>

**Rationale:**

The Master of Administration - Leadership, Master of Human Resource Management, and Master of Business Administration Programs align with the Master's Certificate to allow students to smoothly ladder from a Master's Certificate into the Master of Administration - Leadership, Master of Human Resource Management, and Master of Business Administration Programs. This will ensure that we appropriately recognize individuals who have extensive work experience but do not have the current requirement of ten undergraduate courses. It is an appropriate balance of ensuring academic readiness to graduate-level standards and it creates pathways that recognize prior learning through relevant work experience.

(end of Motion)

**3. FACULTY OF GRADUATE STUDIES AND RESEARCH****3.1 Revision – First Term Registration Requirement**

**MOTION:** To approve the requirement that new international graduate students register for a minimum of 6 credit hours in their first term, effective immediately.

**Rationale:**

Recently, UR International advised the University community of a change in its guidance with respect to registration requirements for international students. Previously, international graduate students beginning their programs in Spring/Summer were allowed to register part-time (min. of 3 credit hours). Under the new guidelines, new international students are advised to register for 6 credit hours in their first term. As previously, current international students who were registered full-time in the Winter term and intend to register full-time in the Fall term may continue to register part-time in the Spring/Summer term.

(end of Motion)

**4. FACULTY OF SCIENCE****4.1 Program Change – Doctor of Philosophy in Biology**

**MOTION:** That the Doctor of Philosophy graduate program be corrected, effective 202430.

**Doctor of Philosophy (PhD) in Biology (after Bachelor's)**

<https://www.uregina.ca/gradstudies/future-students/programs/biology.html>

Current		Proposed	
In exceptional circumstances, a candidate may transfer into the PhD program without completion of a Master's degree. In these cases, the PhD program consists of <del>10</del> to 22 credit hours of course work and 68 to <del>80</del> credit hours of BIOL 901 (for a total of 90 credit hours). Students present an exit seminar based on their thesis research.		In exceptional circumstances, a candidate may transfer into the PhD program without completion of a Master's degree. In these cases, the PhD program consists of <b>13</b> to 22 credit hours of course work and 68 to <b>77</b> credit hours of BIOL 901 (for a total of 90 credit hours). Students present an exit seminar based on their thesis research.	
BIOL 801	3 cr. hrs.	BIOL 801	3 cr. hrs.
BIOL 802	3 cr. hrs.	BIOL 802	3 cr. hrs.
BIOL 887	1 cr. hrs.	BIOL 887	3 cr. hrs.
BIOL 887	1 cr. hrs.	BIOL 887	3 cr. hrs.
BIOL 888*	1 cr. hrs.	BIOL 888*	3 cr. hrs.
BIOL 888*	1 cr. hrs.	BIOL 888*	3 cr. hrs.
BIOL 8XX**	3-12 cr. hrs.	BOL 8XX**	3-12 cr. hrs.
BIOL 901	68-77 cr. hrs.	BIOL 901	68-77 cr. hrs.
<b>Total Credit Hours</b>	<b>90 cr. hrs.</b>	<b>Total Credit Hours</b>	<b>90 cr. hrs.</b>
* Students register twice for a total of 2 credit hours; students are expected to attend BIOL 888 seminars in all semesters unless otherwise advised by the supervisor. ** 800-level courses from any unit: courses from outside of Biology require the approval of the supervisory committee and the Faculty of Graduate Studies and Research.		* Students register twice for a total of 2 credit hours; students are expected to attend BIOL 888 seminars in all semesters unless otherwise advised by the supervisor. ** 800-level courses from any unit: courses from outside of Biology require the approval of the supervisory committee and the Faculty of Graduate Studies and Research.	

**Rationale:**

There was a credit counting error in the previously approved program description.

(end of Motion)

**5. LA CITE UNIVERSITAIRE FRANCOPHONE****5.1 Program Change – Doctorate in Francophone and Intercultural Studies (Thesis Route)**

**MOTION:** To correct the program template of the Doctorate in Francophone and Intercultural Studies – Thesis Route, effective immediately.

Corriger le modèle du programme de doctorat en études francophones et interculturelles – parcours thèse (en vigueur immédiatement).

Current <a href="https://www.uregina.ca/gradstudies/future-students/programs/french.html">https://www.uregina.ca/gradstudies/future-students/programs/french.html</a>		Proposed	
FRN 804 Séminaire de recherché doctorale	3 cr. hrs.	FRN 804 Séminaire de recherche doctorale	3 cr. hrs.
FRN 8XX <del>Directed reading</del>	3 cr. hrs.	FRN 8XX	3 cr. hrs.
FRN 8XX	3 cr. hrs.	FRN 8XX	3 cr. hrs.
FRN 8XX	3 cr. hrs.	FRN 8XX	3 cr. hrs.
FRN 8XX	3 rd. hrs.	FRN 8XX	3 cr. hrs.
<del>Comprehensive exams: written, with oral defense, including a thesis proposal, (Pass / Fail)</del>	0 cr. hrs.	<b>FRN 800 Examen de synthèse/Comprehensive Exam</b>	0 cr. hrs.
FRN 9XX Thesis	45 cr. hrs.	FRN 9XX	45 cr. hrs.
<b>Total</b>	<b>60 cr. hrs.</b>	<b>Total</b>	<b>60 cr. hrs.</b>
Notes: FRN 801 (Bibliographie et méthodologie) – students lacking this postgraduate methods course, an equivalent course, or equivalent experience must take this course in their first semester in addition to the credits required for the Doctorate program.		Notes: FRN 801 (Bibliographie et méthodologie) – students lacking this postgraduate methods course, an equivalent course, or equivalent experience must take this course in their first semester in addition to the credits required for the Doctorate program.	
Up to two courses may be taken outside the academic unit, with the permission of the graduate chair.		Up to two courses may be taken outside the academic unit, with the permission of the graduate chair.	

**Justification/Rationale:**

Ce sont des détails administratifs. La suppression de "lecture dirigée" d'un des quatre cours FRN 8XX évitera toute confusion, étant donné que la description du programme indique quatre cours FRN

8XX (y compris la lecture dirigée).

Le numéro du cours, FRN 800, sera indiqué dans le modèle du programme plutôt que dans la description du cours FRN800.

These are housekeeping items. Removing Directed Reading from one of the four FRN 8XX courses will avoid confusion as the program description indicates four FRN 8XX courses (including directed reading).

The course number, FRN 800, will be listed in the program template as opposed to the course description of FRN800.

(end of Motion)

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**Item(s) for Information:****1. TERMS OF REFERENCE****PhD Committee Terms of Reference**

The Terms of Reference for the PhD Committee, a Sub-Committee of CCFGSR, were approved, effective immediately.

**2. COURSE REPLACEMENTS**

*Faculty of Science – Department of Physics (Effective 202420)*

Current	Proposed
PHYS 890AE  Structure of the Proton  Nucleon electromagnetic form factors and structure functions, Quark-Parton Model, Elements of Perturbative QCD, treatment of Deep Inelastic Scattering within QCD, and various aspects of non-Perturbative QCD including incorporation of transverse degrees of freedom.	<b>PHYS 838</b> <b>The Structure of the Proton</b> Nucleon electromagnetic form factors and structure functions, Quark-Parton Model, Elements of Perturbative QCD, treatment of Deep Inelastic Scattering within QCD, and various aspects of non-Perturbative QCD including incorporation of transverse degrees of freedom. <b>Prerequisite: PHYS 835</b> <b>Note: Students may receive credit for only one of PHYS 890AE and PHYS 838.</b>
PHYS 890AF  The Structure of the Proton II  Parton densities at small x, Hadronic form factors in perturbative QCD, QCD factorization, Generalized Parton Distributions, Nucleon Spin Structure, Nuclear EMC Effect.	<b>PHYS 839</b> <b>The Structure of the Proton II</b> Parton densities at small x, Hadronic form factors in perturbative QCD, QCD factorization, Generalized Parton Distributions, Nucleon Spin Structure, Nuclear EMC Effect. <b>Prerequisite: PHYS 838</b> <b>Note: Students may receive credit for only one of PHYS 890AF and PHYS 839.</b>
PHYS 890 AG  Synchrotron Techniques  The course will explore the physics and experimental aspects of synchrotron radiation light sources and the different methods applied to areas from physics to biology. Techniques such as hard and soft X-ray spectroscopy and imaging, infrared microscopy and spectrometry and X-ray diffraction will be covered in details.	<b>PHYS 875</b>  Synchrotron <b>Radiation</b> Techniques <b>and Their Applications</b>  The physics and experimental aspects of synchrotron radiation light sources and the different methods applied to areas from physics to biology. Techniques such as hard and soft X-ray spectroscopy and imaging, infrared microscopy and spectrometry and X-ray diffraction will be covered in detail.  <b>Prerequisite: Permission of Department Head</b>  <b>Note: Students may receive credit for only one of PHYS 890AG and PHYS 875.</b>
PHYS 890AJ  <del>PET</del> Image Reconstruction  The course will primarily focus on positron emission tomography (PET) instrumentation, data collection, sources of noise in data, image reconstruction and analysis. Topics	<b>PHYS 877</b>  <b>Tomographic</b> Image Reconstruction  The course will primarily focus on positron emission tomography (PET) instrumentation, data collection, sources of noise in data, image reconstruction and analysis. Topics

<p>common to many tomographic imaging modalities; including reconstruction of images from non-uniformly sampled data, from projections, from undersampled data, and image auto-focusing, will be discussed.</p>	<p>common to many tomographic imaging modalities; including reconstruction of images from non-uniformly sampled data, from projections, from under-sampled data, and image auto-focusing, will be discussed.</p> <p><b>Prerequisite: Permission of Department Head</b></p> <p><b>Note: Students may receive credit for only one of PHYS 890AJ and PHYS 877.</b></p>
<p>PHYS 887AE</p> <p>Particle Physics Simulations</p> <p>Reading class with emphasis on practical tasks with four major components: review of C++ programming applicable in particle physics, data analysis with ROOT, detector simulations with GEANT4 and optional topics (e.g. python, event generators, fast detector simulations, code repositories, batch queueing systems, shell scripts).</p>	<p><b>PHYS 878</b></p> <p><b>Computer Simulations in Particle Physics</b></p> <p><b>The course has</b> emphasis on practical tasks with four major components: review of C++ programming applicable in particle physics, data analysis with ROOT, detector simulations with GEANT4 and optional topics (e.g. python, event generators, fast detector simulations, code repositories, batch queueing systems, shell scripts).</p> <p><b>Prerequisite: Permission of Department Head</b></p> <p><b>Note: Students may receive credit for only one of PHYS 887AE and PHYS 888.</b></p>

### 3. COURSE CHANGES

#### *Faculty of Business Administration (Effective 202420)*

Current	Proposed
<p>GBUS 832 – This course is designed to facilitate the understanding of accounting information with an emphasis on making decisions. Students will be provided an opportunity to enhance their communication, teamwork and decision making skills.</p>	<p>GBUS 832 – This course is designed to facilitate the understanding of accounting information with an emphasis on making decisions. Students will be provided an opportunity to enhance their communication, teamwork and decision making skills.</p> <p><b>Note: Levene MBA students cannot receive credit for this course as part of their program requirements.</b></p>

#### *Faculty of Science – Department of Physics (effective 202420)*

Current	Proposed
<p>PHYS 800 – Simple radiating systems, scattering, diffraction; covariant formulation of electrodynamics; the Lienard-Wiechert potentials and the field of a uniformly moving and accelerated electron; the motion of charged particles in e-m fields; Hamiltonian formulation of Maxwell's equations.</p> <p><b>Prerequisite: PHYS 311 and PHYS 322</b></p>	<p>PHYS 800 – Simple radiating systems, scattering, diffraction; covariant formulation of electrodynamics; the Lienard-Wiechert potentials and the field of a uniformly moving and accelerated electron; the motion of charged particles in e-m fields; Hamiltonian formulation of Maxwell's equations.</p> <p><b>Prerequisite: Enrolment restricted to graduate students in Physics, except with permission of the Department Head*.</b></p> <p><b>*Prior exposure to Maxwell's equations, dielectric and</b></p>

	<i>magnetic properties of matter, multipoles, and concepts in physical optics and electromagnetic radiation is expected.</i>
PHYS 801 – Unitary transformations; dynamical equations; symmetries and conservation laws; angular momentum; density operator formalism; creation and annihilation operators; relativistic quantum mechanics; scattering theory. <b>Prerequisite:</b> <del>PHYS 401 or equivalent</del>	PHYS 801 - Unitary transformations; dynamical equations; symmetries and conservation laws; angular momentum; density operator formalism; creation and annihilation operators; relativistic quantum mechanics; scattering theory. <b>Prerequisite:</b> <i>Enrollment restricted to graduate students in Physics, except with permission of the Department Head*.</i>  <i>*Familiarity with axiomatic formulation, representations, angular momentum and spin, perturbation theory, systems of identical particles, and matrix mechanics is expected.</i>
PHYS 803 – Canonical quantization; free scalar, vector and spinor fields; interacting fields; perturbation theory and Feynman diagrams; quantum electrodynamics, renormalization, gauge fields. <b>Prerequisite:</b> <del>PHYS 401 or equivalent</del>	PHYS 803 – Canonical quantization; free scalar, vector and spinor fields; interacting fields; perturbation theory and Feynman diagrams; quantum electrodynamics, renormalization, gauge fields. <b>Prerequisite:</b> <i>Enrollment restricted to graduate students in Physics, except with permission of Department Head*.</i>  <i>*Familiarity with axiomatic formulation, representations, angular momentum and spin, perturbation theory, systems of identical particles, and matrix mechanics is expected.</i>
PHYS 810 – Mathematics of general relativity; unconnected manifolds, affinely connected manifolds and metrically connected manifolds; Physics of general relativity, conservation laws and variational principles. <b>Prerequisite:</b> <del>PHYS 430 or equivalent</del>	PHYS 810 – Mathematics of general relativity; unconnected manifolds, affinely connected manifolds and metrically connected manifolds; Physics of general relativity, conservation laws and variational principles. <b>Prerequisite:</b> <i>PHYS 411 or 811. Students cannot obtain credit for both PHYS 430 and 810.</i>
PHYS 811 – Hamilton-Lagrange equations, Hamilton-Jacobi theory and applications, transformation theory, and special relativity. <b>Prerequisite:</b> <del>PHYS 251 and PHYS 301</del>	PHYS 811 – Hamilton-Lagrange equations, Hamilton-Jacobi theory and applications, transformation theory, and special relativity. <b>Prerequisite:</b> <i>Enrollment restricted to graduate students in Physics, except with permission of the Department Head. Students cannot obtain credit for both PHYS 411 and 811.</i>
PHYS 831 <del>Theoretical</del> Nuclear Physics – Review of symmetries; nucleon-nucleon interaction and polarization observables; nuclear models; the nuclear many-body problem; Hartree-Fock potential; random-phase approximation; quasi-particles; e-m interactions with nuclei; the weak interaction. <b>Prerequisite:</b> <del>PHYS 432 or equivalent,</del> and PHYS 801	PHYS 831 <b>Advanced</b> Nuclear Physics – Review of symmetries; nucleon-nucleon interaction and polarization observables; nuclear models; the nuclear many-body problem; Hartree-Fock potential; random-phase approximation; quasi-particles; e-m interactions with nuclei; the weak interaction. <b>Prerequisite:</b> PHYS 432* and PHYS 801 <i>*or instructor permission</i>
PHYS 833 – Direct and compound nuclear reactions; plane wave theory; scattering theory; phenomenological optical potential, DWBA, DWBA amplitudes and DWIA; coupled channels; microscopic theory of inelastic nucleon-nucleus scattering. <b>Prerequisite:</b> PHYS 801	PHYS 833 – Direct and compound nuclear reactions; plane wave theory; scattering theory; phenomenological optical potential, DWBA, DWBA amplitudes and DWIA; coupled channels; microscopic theory of inelastic nucleon-nucleus scattering. <b>Prerequisite:</b> <i>PHYS 432* and</i> PHYS 801 <i>*or instructor permission</i>
PHYS 834 – Meson exchange theories; accelerators, experimental techniques; electron-nucleon and electron	PHYS 834 – Meson exchange theories; accelerators, experimental techniques; electron-nucleon and electron



nucleus interaction, nucleon-nucleon scattering; nucleon-nucleus interactions; pion-nucleus interactions; relativistic kinematics. <b>Prerequisite:</b> PHYS 833	nucleus interaction, nucleon-nucleon scattering; nucleon-nucleus interactions; pion-nucleus interactions; relativistic kinematics. <b>Prerequisite:</b> PHYS <b>831 or 833</b>
PHYS 835 – Symmetries and quantum numbers of leptons, hadrons, and quarks; e-m, weak, and strong interactions; charm and heavy quark hadrons and hadron spectroscopy; introduction to QCD; unified gauge theories; selected topics beyond the standard model. <b>Prerequisite:</b> PHYS 442 <del>or equivalent</del> , and PHYS 803	PHYS 835 – Symmetries and quantum numbers of leptons, hadrons, and quarks; e-m, weak, and strong interactions; charm and heavy quark hadrons and hadron spectroscopy; introduction to QCD; unified gauge theories; selected topics beyond the standard model. <b>Prerequisite:</b> PHYS 442* and PHYS 803 <b>*or instructor permission.</b>
PHYS 885 – This course is available to full-time Physics Graduate students in good standing. Students will participate in a summer school offered by an approved institute. The school and credit award must be approved by a committee of 3 faculty members, consisting of Physics Graduate Coordinator, Department Head, and one other member (typically the supervisor). NOTE: This class can be taken more than once in a program, for a maximum total of 3 credit hours provided the institute and course content are different each time.	PHYS 885 – This course is available to full-time Physics Graduate students in good standing. Students will participate in a summer school offered by an approved institute. The school and credit award must be approved by a committee of 3 faculty members, consisting of Physics Graduate Coordinator, Department Head, and one other member (typically the supervisor). NOTE: This class can be taken more than once in a program, for a maximum total of 3 credit hours provided the institute and course content are different each time. <b>Prerequisite: Permission of the Department Head.</b>

### 3. COURSE DELETIONS

*Faculty of Business Administration (Effective 202420)*

MBA 832 – Accounting for Managers

*Faculty of Science – Department of Physics (Effective 202420)*

PHYS 812 Relativistic Astrophysics & Cosmology