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gradstudies@sfu.ca
www.sfu.ca/grad

MEMORANDUM

ATTENTION Senate
FROM Jeff Derksen,
Chair of Senate Graduate Studies
Committee (SGSC)
RE: New Course Proposals

DATE January 16, 2020



For information:

Acting under delegated authority at its meeting of January 7, 2020, SGSC approved the following new courses, effective **Fall 2020**:

Faculty of Applied Sciences

School of Computing Science

- 1) New course: CMPT 700 Technical Writing and Research Communication

Beedie School of Business

- 2) New course: BUS 600 Orientation
- 3) New course: BUS 618 Indigenous Business Management
- 4) New course: BUS 675 Indigenous Economies

Faculty of Science

Department of Mathematics

- 5) New course: APMA 940 Mathematics of Data Science

MEMORANDUM

Attention Dr. Jeff Derksen Date Dec 11, 2019
Dean, Graduate Studies

From Dr. Parvaneh Saedi psaedi@sfu.ca
Faculty of Applied Science, Graduate Studies Committee

Re: FAS-CMPT's ~~Calendar changes – program requirements~~
and new course proposal – CMPT 700

The faculty of Applied Sciences Graduate Studies Committee would request for ~~calendar changes~~ and a new course proposal 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 fall 2020.

Regards,
Parvaneh Saedi





COMPUTING SCIENCE

MEMO

BURNABY
9971 Applied Sciences
Building
8888 University Drive
Burnaby BC V5A 1S6
Canada

SURREY
250-13450 102 Avenue
Surrey, BC V3T 0A3
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ATTENTION	Pavarnah Saeedi, Associate Director
FROM	Ghassan Hamarneh, Graduate Director
RE	Calendar changes program requirements to support new Breadth requirements New course proposal – CMPT 700
DATE	December 10, 2019

Please find attached ~~the calendar changes and~~ a new course proposal 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 Fall 2020.

Summary and Rationale:

~~The proposed calendar changes have been submitted in order to simplify our current calendar entry and strengthen our programming. The former is based on regular feedback that our calendar is confusing and not instructive for students.~~

~~The current entry sets out breadth and other requirements for programs which, again, is confusing to students.~~

~~As well, the School has recently made numerous changes with respect to breadth requirements. In order to manage the updates, the new calendar entry sets out only program requirements (eg. total credits) and will include a link to our School website that will provide students with details of required course work for each program.~~

~~Please note that the School has a Breadth Committee that reviews course work completed by each student prior to graduation being recommended.~~

NEW COURSE PROPOSAL – effective Fall 2020



COMPUTING SCIENCE

CMPT 700 – Technical Writing and Research *Communications* (3 units)
(DUB)

We designed the above course, with the primary motive of generating well-rounded computer scientists. Through this course, students will improve their writing and presentation skills, and dive into other topics that are not regularly covered in graduate courses.

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

A handwritten signature in black ink, appearing to read "Ghassan", with a long horizontal flourish extending to the right.

Ghassan Hamarneh
Graduate Chair, School of Computing Science

New Graduate Course Proposal

Course Subject (eg. PSYC) CMPT	Number (eg. 810) 700	Units (eg. 4) 3
Course title (max. 100 characters) Technical Writing and Research Communication		
Short title (for enrollment/transcript - max. 30 characters) Technical Writing & Research		
Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description) See attached		
Rationale for introduction of this course Train well-rounded graduate students; advance their ability to communicate and review scientific research, and become knowledgeable about issues surrounding computing science research.		
Term of initial offering (eg. Fall 2019) Fall 2020	Course delivery (eg. 3 hrs/week for 13 weeks) 2hr lecture + 1hr seminar / week for 13 weeks	
Frequency of offerings/year Once per year	Estimated enrollment per offering 100	
Equivalent courses (courses that replicates the content of this course to such an extent that students should not receive credit for both courses) N/A		
Prerequisite and/or Corequisite		
Criminal record check required? <input type="checkbox"/> Yes <input type="checkbox"/> No if yes is selected, add this as prerequisite		Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components * <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Independent <input type="checkbox"/> Capstone <input type="checkbox"/> _____		
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory/ Unsatisfactory <input type="checkbox"/> In Progress / Complete		
Repeat for credit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Total repeats allowed? _____	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with a undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and the additional course requirements for graduate students:		

* See important definitions on the curriculum website.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Manolis Savva
Additional faculty members, space, and/or specialized equipment required in order to offer this course Steven Pearce, Diana Cukierman, Oliver Schulte

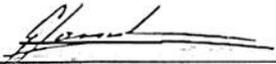
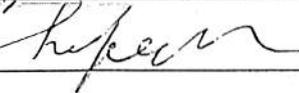
CONTACT PERSON

Academic Unit / Program	Name (typically, Graduate Program Chair)	Email
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ACADEMIC UNIT APPROVAL

A course outline must be included.

Non-departmentalized faculties need not sign

Graduate Program Committee Ghassan Hamarneh	Signature 	Date Nov 25, 2019
Department Chair Mohamed Hefeeda	Signature 	Date Nov 25, 2019

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

Overlap check done? YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Parvaneh Saeedi	Signature 	Date 12/11/2019
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A library review will be conducted. If additional funds are necessary, DGS will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Jeff Derksen	Signature 	Date JAN 16 2020
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ADMINISTRATIVE SECTION (for DGS office only)	
Library Check: _____	
Course Attribute: _____	If different from regular units:
Course Attribute Value: _____	Academic Progress Units: _____
Instruction Mode: _____	Financial Aid Progress Units: _____
Attendance Type: _____	

CMPT 700 – Course Description

Covers technical writing and communication skills for research in computing science. Introduces students to scholarly publication procedures, research collaboration norms, ethics and intellectual property issues, as well as broadly useful tools for writing about and presenting research. Includes research seminar attendance and practicing constructive critique and feedback for ongoing research. The objective is to train well-rounded graduate students, to advance their ability to communicate and review scientific research, to introduce broadly used research software tools, and to become knowledgeable about issues surrounding computing science research.

CMPT700 Technical Writing and Research *Communication* (SvB)

DESCRIPTION

Covers technical writing, communication skills, and broadly useful tools for research in computing science. Introduces students to scholarly publication procedures, research collaboration norms, ethics and intellectual property issues, as well as tools for organizing, writing about and presenting research. Includes research seminar attendance and practicing constructive critique and feedback for ongoing research.

The objective of this course is to train well-rounded graduate students, to advance their ability to communicate and review scientific research, to introduce broadly used research software tools, and to become knowledgeable about issues surrounding computing science research.

TOPICS

- Technical writing and communication (~50% of the course)
 - Including how to read, write, and review papers and presentation skills
 - Introducing students to tools such as Latex, Mendeley/RefWorks, vector graphics/flowcharts, and creating videos and demos
- Identifying and avoiding plagiarism
- Ethics in Computer Science (e.g., AI ethics)
- Scholarly publications (peer review process, journals vs conferences, open vs closed access, publication workflow and cost, citations and impact factor, and venues and quality)
- Intellectual property and entrepreneurship (IP ownership, tech transfer, startups, NDAs, ...)
- Research collaboration (teamwork, authorship, acknowledgments, ...)
- Graduate students' rights and duties
- Attending research seminars (defenses, faculty candidate talks, distinguished lectures, etc) and writing summary/critique of them.

GRADING

Grading will be based on written assignments, oral presentations, peer feedback, participation for in-class discussion, and attendance at research seminars. Grading breakdown:

- Written assignments 20%
- Oral presentations 20%
- Class discussion participation 20%
- Peer feedback on assignments 10%
- Peer feedback on presentations 10%
- Research seminar attendance 10%
- Research seminar critique 10%

MATERIAL

- Writing for Computer Science, Third Edition by Justin Zobel



**BEEDIE SCHOOL
OF BUSINESS**

Segal Graduate School

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busadmin@sfu.ca

Memo to SGSC

To: Senate Graduate Studies Committee
From: Andrew Gemino Associate Dean, Graduate Programs
Re: Curriculum revisions to Executive MBA and MSc Finance
Date: December 12, 2019

The following curriculum revisions have been approved by the Beedie School of Business and are forwarded to the Senate Graduate Studies Committee for approval. These curriculum items should be effective for Fall 2020.

Please include them on the next SGSC agenda.

- New Course: BUS 675, 604, 618
- ~~Course changes—BUS 730 Title and Description Change~~
- ~~Program Change: EMBA~~

Thank you for your attention herein. Should you have any questions or concerns, please do not hesitate to contact me.

Dr. Andrew Gemino
Professor, Management Information Systems
Associate Dean, Graduate Programs, Beedie School of Business

New Graduate Course Proposal

Course Subject (eg. PSYC) BUS	Number (eg. 810) 600	Units (eg. 4) 0
Course title (max. 100 characters) Orientation		
Short title (for enrollment/transcript - max. 30 characters) Orientation		
Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description) The IBL orientation course is an intensive 1-day program for students to meet each other and to develop strategies for academic success. Through experiential learning and team building activities students develop understanding and skills for contributing effectively in team-based learning environment. Students will learn about academic expectations as well as resource support available at SFU. This course is graded on a Satisfactory/Unsatisfactory basis.		
Rationale for introduction of this course This is a new course that prepares students to academia and the IBL EMBA program expectations.		
Term of initial offering (eg. Fall 2019) Fall 2020	Course delivery (eg. 3 hrs/week for 13 weeks) 7 hrs/day for 1 day	
Frequency of offerings/year Once/year	Estimated enrollment per offering 35	
Equivalent courses (courses that replicates the content of this course to such an extent that students should not receive credit for both courses)		
Prerequisite and/or Corequisite Prerequisite: Only for students in the Indigenous Business Leadership		
Criminal record check required? <input type="checkbox"/> Yes if yes is selected, add this as prerequisite		Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Campus where course will be taught <input type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input checked="" type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components * <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Independent <input type="checkbox"/> Capstone <input type="checkbox"/> _____		
Grading Basis <input type="checkbox"/> Letter grades <input checked="" type="checkbox"/> Satisfactory/ Unsatisfactory <input type="checkbox"/> In Progress / Complete		
Repeat for credit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Total repeats allowed? _____	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with a undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and the additional course requirements for graduate students:		

* See important definitions on the curriculum website.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course tba
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program Beedie School of Business	Name (typically, Graduate Program Chair) Debra Hoggan, Manager	Email dhoggan@sfu.ca
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ACADEMIC UNIT APPROVAL

A course outline must be included.

Non-departmentalized faculties need not sign

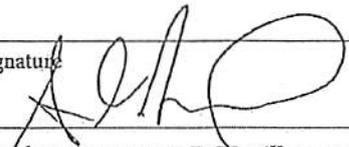
Graduate Program Committee	Signature	Date
Department Chair Eric Werker, A/Academic Director		December 10, 2019

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

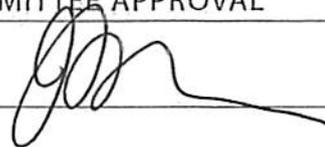
Overlap check done? YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Andrew Gemino, Assoc. Dean		December 10, 2019
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A library review will be conducted. If additional funds are necessary, DGS will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Jeff Derksen		JAN 16 2020
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ADMINISTRATIVE SECTION (for DGS office only) Library Check: _____ Course Attribute: _____ Course Attribute Value: _____ Instruction Mode: _____ Attendance Type: _____	If different from regular units: Academic Progress Units: _____ Financial Aid Progress Units: _____
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BUS 600: ORIENTATION

Instructor: tba

Semester: Fall 2020

Email:

Classroom: tba

Phone:

Office:

Course Description

The IBL orientation course is an intensive 1-day program for students to meet each other and to develop strategies for academic success. Through experiential learning and team building activities students develop understanding and skills for contributing effectively in team-based learning environment. Students will learn about academic expectations as well as resource support available at Beedie School of Business as well as the broader SFU campus community.

This course is a prerequisite for the IBL EMBA program.

Objectives

- Meet with other IBL EMBA cohort members, learn more about the communities and the organizations that they come from and create the foundation for effective team-based learning.
- Develop increased understanding of how personal styles and backgrounds contribute to individual and team-based performance throughout your EMBA journey.
- Develop individual and team strategies for program success.
- Learn strategies from alumni and staff as to insights for program success and obtain advice on how to balance work/school/personal life portfolio throughout the program.

Course Expectations

The Fall Semester commences on **September 6** and is completed on **December 24, 2020**.

During this course, you can expect 7 hours in class and at least 4 hours of pre-class work. These pre-class activities may include:

- participating in online orientation activities
- pre-readings related to university services available to graduate students
- internet or library research
- completing pre-assignments

Course Structure

This course will consist of a mixture of interactive individual and team activities, a discussion panel and presentations.

The course is schedule to take place on campus.

Book and Materials

Materials will be provided during the session.

Learning and Assessments

Assessment summary

This is a required course and full participation is expected. Evaluation in the course will be based on a combination of in-class group and individual activities.

Other Information

Course specific information will be distributed and posted on Canvas.

Reading and Course Schedule

The course schedule can be found on Canvas.

Academic Integrity

SFU's Academic Integrity web site <http://www.sfu.ca/students/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

About the Course Instructor

To be provided at a later date.



New Graduate Course Proposal

Course Subject (eg. PSYC) BUS	Number (eg. 810) 618	Units (eg. 4) 4.0
Course title (max. 100 characters) Indigenous Business Management		
Short title (for enrollment/transcript - max. 30 characters) Business Management		
Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description) In an increasingly complex global business environment, a critical perspective on organizations as a people-centered approach to business development and management is essential. The goals of this course are to provide real-world tools and strategies to excel within a variety of Indigenous business environments. Students will analyze contemporary organizational theory against Indigenous concepts and principles of management, change and relational wellbeing.		
Rationale for introduction of this course Indigenous business management is a new topic and a new course that has been identified as a need for Indigenous business and organizations.		
Term of initial offering (eg. Fall 2019) Fall 2020	Course delivery (eg. 3 hrs/week for 13 weeks) 7 hrs/day for 5 days	
Frequency of offerings/year Once/year	Estimated enrollment per offering 35	
Equivalent courses (courses that replicates the content of this course to such an extent that students should not receive credit for both courses)		
Prerequisite and/or Corequisite Prerequisite: Only for students in the Indigenous Business Leadership		
Criminal record check required? <input type="checkbox"/> Yes if yes is selected, add this as prerequisite		Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Campus where course will be taught <input type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input checked="" type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components* <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Independent <input type="checkbox"/> Capstone <input type="checkbox"/> _____		
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory/ Unsatisfactory <input type="checkbox"/> In Progress / Complete		
Repeat for credit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Total repeats allowed? _____	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with a undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and the additional course requirements for graduate students:		

* See important definitions on the curriculum website.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course tba
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program Beedie School of Business	Name (typically, Graduate Program Chair) Debra Hoggan, Manager	Email dhoggan@sfu.ca
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ACADEMIC UNIT APPROVAL

A course outline must be included.

Non-departmentalized faculties need not sign

Graduate Program Committee	Signature	Date
Department Chair Eric Werker, A/Academic Director		December 10, 2019

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

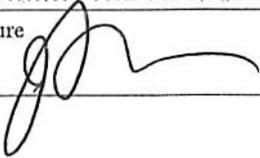
Overlap check done? YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Andrew Gemino, Assoc. Dean	Signature 	Date December 10, 2019
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A library review will be conducted. If additional funds are necessary, DGS will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Jeff Derksen	Signature 	Date JAN 16 2020
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ADMINISTRATIVE SECTION (for DGS office only)	
Library Check: _____	If different from regular units:
Course Attribute: _____	Academic Progress Units: _____
Course Attribute Value: _____	Financial Aid Progress Units: _____
Instruction Mode: _____	
Attendance Type: _____	

BUS 618: INDIGENOUS BUSINESS MANAGEMENT

Instructor: tba

Semester: Fall 2020

Email:

Classroom: tba

Phone:

Office:

Course Description

In an increasingly complex global business environment, a critical perspective on organizations as a people-centered approach to business development and management is essential. The goals of this course are to provide real-world tools and strategies to excel within a variety of Indigenous business environments. Students will analyze contemporary organizational theory against Indigenous concepts and principles of management, change and relational wellbeing in practice.

Objectives

The primary course objective is to provide students with knowledge, skills and confidence to manage businesses and organizations through stages of change and growth. The objective will be met by exploring topics including organizational structures and management controls, performance measurements and management practices that are unique to Indigenous organizations. Specifically, the course will explore contemporary management issues and insights as well as how traditional knowledge and cultural protocols impact the management of Indigenous businesses and organizations.

Course Expectations

The Fall Semester commences on **September 8** and is completed on **December 24, 2020**.

During this course, you can expect 35 hours of class time. In addition, there is on average of 10 hours of out-of-class work weekly for each course. These out-of-class activities will include: participating in online activities, preparing readings and cases, answering practice questions, online and/or library research and reviewing sources, conducting interviews, and project planning.

While this course is scheduled in a compressed format where classes are held in intensive sessions, expectations of consistent preparation and full participation from students remains for the length of the semester.

Course Structure

This course will consist of a combination of case study discussions, small group exercises, case analysis, and group presentations.

Books and Materials

1. All textbook/s readings will be provided to the students prior to the start of the course.
2. Selected readings and articles will be provided on your Canvas site.

Learning and Assessments

Assessment summary

Evaluation in the course will be based on a combination of class participation, group and individual work. As in all large courses in the Beedie School of Business, grading norms will be observed. In other words, students with the top marks relative to the class average will receive the top grades.

Individual	1) Reflection Journal	25%
	2) Final Exam (take-home)	30%
Group	1) Group Research Paper	25%
	2) Group Project/Presentation	20%
Total		100%

Individual Assignment 1 – Reflection Journal **Due: tba**

5-page self-reflection on your management experience and new insights.

Individual Assignment 2 – Final Exam **Due: tba**

The final exam will be a take home. It will cover all readings, examples and case analysis introduced during the course.

Group Assignment 1 – Group Research Paper **Due: tba**

Students will take what they have learned and compile it into a paper that explores innovative management techniques within an Indigenous business or organization.

Group Assignment 2 – Group Project & In-class Presentation **Due: tba**

Students will be assessed on their participation within your groups and during in class discussions.

Other Information

The course will include in-class self-assessments and team evaluations.

Reading and Course Schedule

Readings can be found on Canvas and in your textbook. They are labeled accordingly.

Academic Integrity

SFU's Academic Integrity web site <http://www.sfu.ca/students/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

About the Course Instructor

To be provided at a later date.



New Graduate Course Proposal

Course Subject (eg. PSYC) BUS	Number (eg. 810) 675	Units (eg. 4) 4.0
Course title (max. 100 characters) Indigenous Economies		
Short title (for enrollment/transcript - max. 30 characters) Indigenous Economies		
Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description) Indigenous economies goes beyond the economic realm of merely providing sustenance to individuals. The course encompasses global Indigenous worldviews, theories and concepts of Indigenous economy based on traditional principles of wealth and value. Students will acquire an understanding of the philosophical and ethical application of Indigenous economic worldviews.		
Rationale for introduction of this course This is a new topic that has been identified as a need for Indigenous businesses, organizations and communities.		
Term of initial offering (eg. Fall 2019) Fall 2020	Course delivery (eg. 3 hrs/week for 13 weeks) 7 hrs/day for 5 days	
Frequency of offerings/year Once/year	Estimated enrollment per offering 35	
Equivalent courses (courses that replicates the content of this course to such an extent that students should not receive credit for both courses)		
Prerequisite and/or Corequisite Prerequisite: Only for students in Indigenous Business Leadership		
Criminal record check required? <input type="checkbox"/> Yes <input type="checkbox"/> No if yes is selected, add this as prerequisite		Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Campus where course will be taught <input type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input checked="" type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components * <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Independent <input type="checkbox"/> Capstone <input type="checkbox"/> _____		
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory/ Unsatisfactory <input type="checkbox"/> In Progress / Complete		
Repeat for credit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Total repeats allowed? _____	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with a undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and the additional course requirements for graduate students:		

* See important definitions on the curriculum website.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Dara Kelly
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program Beedie School of Business	Name (typically, Graduate Program Chair) Debra Hoggan, Manager	Email dhoggan@sfu.ca
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ACADEMIC UNIT APPROVAL

A course outline must be included.

Non-departmentalized faculties need not sign

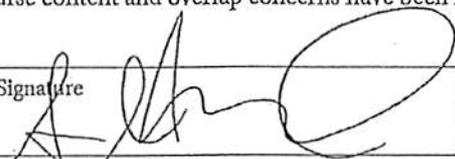
Graduate Program Committee	Signature	Date
Department Chair Eric Werker, A/Academic Director		December 10, 2019

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

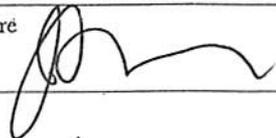
Overlap check done? YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Andrew Gemino, Assoc. Dean	Signature 	Date December 10, 2019
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A library review will be conducted. If additional funds are necessary, DGS will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Jeff Derksen	Signature 	Date JAN 16 2020
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ADMINISTRATIVE SECTION (for DGS office only)

Library Check: _____
Course Attribute: _____
Course Attribute Value: _____
Instruction Mode: _____
Attendance Type: _____

If different from regular units:
Academic Progress Units: _____
Financial Aid Progress Units: _____

BUS 675: INDIGENOUS ECONOMIES

Instructor: Dr. Dara Kelly

Semester: Fall 2020

Email: dara_kelly@sfu.ca

Classroom: tba

Phone: 778-782-9475

Office: 4925

Course Description

Traditional Indigenous economies goes beyond the economic realm of merely providing sustenance to individuals. The course encompasses global Indigenous worldviews, theories and concepts of Indigenous economy based on traditional principles of wealth and value. Aspects of the particular economic environments where Indigenous views on wealth and value intersect with Anglo-Western principles of wealth and value will be explored. Students will engage and apply their learning through the lens of Indigenous ethical economies and human development as one mechanism by which Indigenous notions of value are expressed in economic and business environments. The course offers relational comprehension through content that encourages transformative approaches to development, innovative models based on Indigenous knowledge, and up-to-date research in this field.

Objectives

By the end of this course it is expected that the student will be able to:

1. Demonstrate an understanding of the philosophy and ethical application of Indigenous knowledges and worldviews within business and economic environments;
2. Identify Indigenous frameworks of wealth and value that inform Indigenous approaches to business, entrepreneurship and economic development;
3. Develop the foundation for strategies and approaches to facilitate cultural, social, spiritual, environmental and economic development;
4. Apply an expanded vision of wealth and value to make an ethical "value case" that aligns with a holistic view of Indigenous business and economic environments.

Course Expectations

The Fall Semester commences on **September** and is completed on **December 24, 2020**.

During this course you can expect at least 35 - 40 hours of class time and 10 hours of out-of-class work to prepare for in-class discussions. These out-of-class activities will include preparing readings and cases, reflective questions to share in class, and project planning.

Course Structure

This course will consist of a mixture of case study discussions, small group exercises, case analysis, and group assignments.

Book and Materials

Klemm Verbos, A., Henry, E., & Peredo, A. M. (Eds.). (2017). *Indigenous aspirations and rights: The case for responsible business and management*. London and New York: Routledge.

Spiller, C., & Wolfgramm, R. (2015). *Indigenous spiritualities at work: Transforming the spirit of business enterprise*. Charlotte, NC: IAP - Information Age Publishing.

Citations: Please use APA Citation, please see link for a tutorial. <https://www.lib.sfu.ca/help/cite-write/citation-style-guides/apa/apabusiness>

SFU library - Referencing Traditional Knowledge Keepers: <https://www.lib.sfu.ca/help/cite-write/citation-style-guides#new-citing-indigenous-elders-and-knowledge-keepers>

Learning and Assessments

Assessment summary

You will be assessed through a series of individual and group assignments. Each assignment focuses on the application of the teachings to an organization you are interested in. There are no mid-term or final exams for this course.

Individual	Written Assignment 1	30%
	Written Assignment 2	30%
Group	Written Assignment	20%
	Final Presentation	20%
Total		100%

Individuals present 1-minute reflections

Each individual group member will be responsible during the course to provide one 60 second "elevator" summary (oral) of a key piece of knowledge they and/or their small group learned or experienced from the preceding class, and why it held significance. Each small group will need to organize the schedule of which group individual presents on Class One, Class Two, Class Three, Class Four, and Class Five. These brief presentations will take place at the start of each class. Groups are asked to submit their presentation names and schedule after Class One.

Written Assignment 1: Reflective essay on your Worldview and sector **Due:**

In this essay, you are expected to articulate your worldview and establish your positionality in terms of the sector that you come from or hope to be involved with as a career over the long term, who you are coming into this course, and learning that you hope to gain from this course. This is the first step toward your final reflective essay due at the end of the course. We highly recommend that you think about consistently tracking your learning development and transformation by recording what you thought, what you felt and what you experienced in class after every class as a base to both written

individual assignments. In the essay, reflect on key concepts from the course and either discuss these issues on their own merit or explore them in the context of your own experience. Approaches to begin thinking might include:

- State the questions that you want answered by the end of the course;
- Describe your sector;
- What is distinct or new to you about any Indigenous worldview or concept encountered in the course so far?
- How is this course impacting/affecting my way of feeling, thinking about understanding of economics?
- How have I been changed or transformed, personally and professionally in learning about Indigenous economies and applying ethical values within Indigenous business environments?

Length: 5 pages, double-spaced

Written Assignment 2: Reflective essay on Integrating Worldviews and applying ethical economics **Due:**

Given the rapid pace of change in global business environments, relationships with Indigenous communities are becoming increasingly pertinent across a range of sectors and business environments. The key element of this essay is to take your understanding of Indigenous wealth and value concepts and relate those to your professional experience including how one may have been transformed as a result of the experiences and learnings throughout the course. Approaches to begin thinking might include:

- Reflect on, and summarize your understanding of worldview when you entered the course.
- How do you see wealth and value differently applied within your area of work?
- What are the most critical factors in defining wealth and value from Indigenous perspectives?
- My sector could adapt, change, or improve their understanding about Indigenous worldviews by...
- What I will do differently as a result of...

Length: 10 pages, double-spaced

Group Written Assignment: "Value case" proposal **Due:**

Each group is responsible for creating a written "value case" (as opposed to a business case) for a community development project for an Indigenous community in Canada. In this course, you will have encountered different ways of seeing wealth and value. This assignment asks you to apply what you have learned and present a proposal that incorporates all five ways of measuring value: social, cultural, environmental, spiritual and economic. For example, the article "Wise Up: Creating organizational wisdom through an ethic of kaitiakitanga" covers them as "wellbeings", and "Chapter 7, The Ayni principle: An Indigenous theory of value creation" discusses good living. The value case is a high level justification for the project to be turned into a fulsome business plan at a later date (that you will not be writing). Components of the value case proposal should include:

1. Worldview statement of the community; What is the community?
2. What are you proposing as a community development project?
3. Describe key communities involved, including yours – are you a company, NGO, government body, consultant or community member?

4. How do you plan to build and maintain good relationships throughout the duration of the project?
5. Identify how the five value measures align with the worldview.
6. Identify two potential value risks of the project.
7. Analyze whether the risks are manageable in order to maintain reasonable balance among the set of five values.
8. Propose how you plan to address the potential risks to maintain good relationships in the long term.

Length: 15-20 pages including references

Group Final Presentation: Dragon's Den "Value case" proposal

Due:

Each group will present their value proposal to an Indigenous "Dragon's Den" style panel, made up of experienced Indigenous business people. Visuals are welcome. You can include any component of the proposal in the presentation, but we suggest you won't have time to include all components. Be selective in your pitch.

All group members must present together. Presentations will be timed and have a maximum of **nine minutes** before the panel, followed by six minutes of questions and answers. The panel will provide feedback, ask thoughtful questions, and may make hypothetical offers to support the project (no actual investments or business offers are made). They will also feedback on the alignment of the proposal to their understandings of the worldview to the given community.

You are expected to either incorporate the panelists' feedback into your final written project submission, or if you don't feel that the feedback is appropriate for your proposal, you must prepare a justification in your final proposal as to why the feedback could not, or should not be included. This will have to be solidly justified and reasonably argued, as the panelists may be from the selected communities themselves.

Reading and Course Schedule

Readings can be found on Canvas, your textbook and through external links. They are labeled accordingly.

Please ensure that citations are in full APA (or other popular citation style), in order to ensure that the correct version of cases and articles are obtained for your course, and that copyright law is met.

Session 1 – Introduction to Indigenous Business Environments

Reading 1. Dell, K., Staniland, N., & Nicholson, A. (2018). Economy of mana: Where to next? *MAI Review*, 7(1), 51–65. DOI: 10.20507/MAIJournal.2018.7.1.5

Reading 2. Hēnare, M. (2015). Tapu, mana, mauri, hau, wairua: A Māori philosophy of vitalism and cosmos. In C. Spiller & R. Wolfgramm (Eds.), *Indigenous spiritualities at work: Transforming the spirit of enterprise* (pp. 77–98). Charlotte, NC: Information Age Publishing Inc.

Session 2 - Indigenous Worldviews

Reading 1: Huambachano, M. (2015). The Ayni principle: An Indigenous theory of value creation. In Chellie Spiller & R. Wolfgramm (Eds.), *Indigenous spiritualities at work: Transforming the spirit of enterprise* (pp. 99–115). Charlotte, NC: Information Age Publishing.

Reading 2: Spiller, Chellie, Pio, E., Erakovic, L., & Henare, M. (2011). Wise Up: Creating Organizational Wisdom Through an Ethic of Kaitiakitanga. *Journal of Business Ethics*, 104(2), 223–235. <https://doi.org/10.1007/s10551-011-0905-y> (Canvas)

Session 3 – Business, Law and Indigenous Nations

Reading 1: Verbos, A. K., Henry, E., & Peredo, A. M. (2017). Business's effects on Indigenous aspirations and rights: An introduction. In *For Responsibility in Management Education. Indigenous aspirations and rights: The case for responsible business and management* (pp. 1–9). London and New York: Routledge.

Reading 2: Case Study: Verbos, A. K. (2017). Chapter 6: Indigenous human rights perils as an ongoing challenge. In *For Responsibility in Management Education. Indigenous aspirations and rights: The case for responsible business and management*. London and New York: Routledge. (need page #s)

Session 4 – Indigenous Entrepreneurship

Reading 1: Henry, E., Newth, J., & Spiller, C. (2017). Emancipatory Indigenous social innovation: Shifting power through culture and technology. *Journal of Management & Organization*, 23(6), 786–802. <https://doi.org/10.1017/jmo.2017.64> (Canvas)

Reading 2: Case Study: Sayers, J., & Peredo, A. M. (2017). Chapter 12: Hupacaseh First Nation: Roadmap to a sustainable economy. In *For Responsibility in Management Education. Indigenous aspirations and rights: The case for responsible business and management*. London and New York: Routledge. (need page #s)

Session 5 – Global Indigenous Business Environments

Reading 1. Kelly, D. (2019, June 24). *Envisioning Indigenomics: Indigenous intergenerational futures of wealth and wellbeing*. Presented at the Inaugural Indigenomics Research Forum, Richmond, BC. (Canvas)

Reading 2. Nicholson, A., Spiller, C., & Pio, E. (2019). Ambicultural governance: Harmonizing Indigenous and western approaches. *Journal of Management Inquiry*, 28(1), 31–47. <https://doi.org/10.1177/1056492617707052> (Canvas)

Reading 3. Case Study: Spiller, C, & Nicholson, A. (2017). *Wakatu Incorporation: Balancing kaitiaki stewardship and commerce*. Retrieved from <http://sk.sagepub.com/cases/wakatu-incorporation-balancing-kaitiaki-stewardship-and-commerce> (Canvas)

Reading 4. Henry, E., Peredo, A. M., & Verbos, A. K. (2017). Conclusion: Making the case for responsible business and management. In *For Responsibility in Management Education. Indigenous aspirations and rights: The case for responsible business and management* (pp.). London and New York: Routledge.

Academic Integrity

SFU's Academic Integrity web site <http://www.sfu.ca/students/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

About the Course Instructor



Dr. Dara Kelly, an EMBA IBL instructor, is from the Leq'á:mel First Nation, part of the Stó:lō Coast Salish up the Fraser River in British Columbia. Her research interests focus on Indigenous economic development, ancestral leadership, and Coast Salish freedom and unfreedom and the Capabilities Approach. Dara earned her PhD at The University of Auckland School of Business where she was a Researcher with the Mira Szászy Research Centre for Māori and Pacific Economic Development. In addition to research, she has professional experience in leadership development programming.



FACULTY OF SCIENCE
Dean of Science

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MEMORANDUM

ATTENTION Senate Graduate Studies Committee DATE December 11, 2019
FROM Michael Silverman, Associate Dean of Research and Graduate Studies PAGES 1
RE: Program changes to the MSc/PhD in Applied and Computational Mathematics

The following curriculum items have been approved by the Faculty of Science and are forwarded to the Senate Graduate Studies Committee for approval. These curriculum items should be effective for Fall 2020. Please include them on the next SGSC agenda.

Department of Mathematics

~~Program change to MSc in Applied and Computational Mathematics~~

~~Program change to PhD in Applied and Computational Mathematics~~

New course: APMA 940

Please see attached memo from N. Itlen, Graduate Chair, Mathematics, for details.

Michael A. Silverman, Ph.D.
Faculty Graduate Chair

MEMO

To: Michael Silverman

From: Department of Mathematics Graduate Studies Committee

Re: Program changes to the MSc/PhD in Applied and Computational Mathematics

Date: December 9, 2019

The following ~~program changes and~~ new course have been approved by the Department of Mathematics:

- Introduction of new course APMA 940 -- Mathematics of Data Science
- ~~Revision to the APMA MSc program that aims to:~~
 - ~~Expand the list provided for the "breadth" course requirements to include additional course choices as well as introducing two new course groups (in discrete mathematics and mathematics of data).~~
 - ~~Reduce the course unit requirements in the thesis option from 24 to 22.~~
 - ~~Eliminate the existing project option and replace it with a course work option.~~
- ~~Revision to the APMA PhD program that cleans up the Calendar description to account for some existing errors/inconsistencies as well as to ensure consistency with the new APMA MSc program description.~~



Nathan Ilten

Graduate Chair, Department of Mathematics



New Graduate Course Proposal

Course Subject (eg. PSYC) APMA	Number (eg. 810)940	Units (eg. 4)4
Course title (max. 100 characters) Mathematics of Data Science		
Short title (for enrollment/transcript - max. 30 characters) Mathematics of Data Science		
Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description) Theory and algorithms for problems in data science with an emphasis on mathematical aspects. Topics may include dimension reduction, supervised learning, including regression and classification, unsupervised learning, including clustering and latent variable modeling, deep learning, algorithms for big data, and foundations of learning.		
Rationale for introduction of this course To provide graduate students in Mathematics with the theoretical background to work with data in their research and other work. Data science is one of the most popular areas that our students work in when they graduate and it is useful for many disciplines in science, engineering, and business.		
Term of initial offering (eg. Fall 2019) Fall 2020	Course delivery (eg. 3 hrs/week for 13 weeks) 4 hrs/week for 13 weeks	
Frequency of offerings/year 1/two years	Estimated enrollment per offering 15	
Equivalent courses (courses that replicates the content of this course to such an extent that students should not receive credit for both courses)		
Prerequisite and/or Corequisite none		
Criminal record check required? <input type="checkbox"/> Yes <input type="checkbox"/> No if yes is selected, add this as prerequisite		Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus		
Course Components * <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Independent <input type="checkbox"/> Capstone <input type="checkbox"/> _____		
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory/ Unsatisfactory <input type="checkbox"/> In Progress / Complete		
Repeat for credit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Total repeats allowed? _____	Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Required course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Combined with a undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and the additional course requirements for graduate students:		

* See important definitions on the curriculum website.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Paul Tupper, Ben Adcock, Caroline Colijn, Cedric Chauve
Additional faculty members, space, and/or specialized equipment required in order to offer this course none

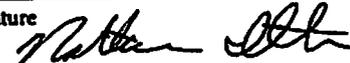
CONTACT PERSON

Academic Unit / Program Mathematics	Name (typically, Graduate Program Chair) Nathan Ilten	Email nilten@sfu.ca
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ACADEMIC UNIT APPROVAL

A course outline must be included.

Non-departmentalized faculties need not sign

Graduate Program Committee NATHAN ILTEN	Signature 	Date Nov 21, 2019
Department Chair W C Kropinski	Signature 	Date NOV 21 2019

FACULTY APPROVAL

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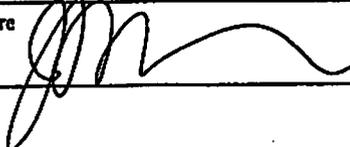
Overlap check done? YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Michael Silverman	Signature 	Date 12.17.2019
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A library review will be conducted. If additional funds are necessary, DGS will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Jeff Derksen	Signature 	Date JAN 16 2020
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Simon Fraser University, Department of Mathematics

Outline: APMA 940 – Mathematics of Data Science

Grading Scheme: Homework: 30%, class presentations: 20%, midterm: 20%, final project 30%.

Prerequisites: Basic probability, proficiency with Matlab or R or a similar programming environment. You don't need to know any statistics.

Calendar Description: Theory and algorithms for problems in data science with an emphasis on mathematical aspects. Topics may include dimension reduction, supervised learning, including regression and classification, unsupervised learning, including clustering and latent variable modeling, deep learning, algorithms for big data, and foundations of learning.

Course Details:

- Mathematical preliminaries (probability, linear algebra)
- Linear dimensionality reduction (SVD, PCA, random projections)
- Classification (SVMs, kernel methods)
- Regression (linear least squares, subset selection, Lasso)
- Deep learning (Boltzmann machines, neural networks, autoencoders)
- Foundations of learning (PAC learning, VC dimension)
- Algorithms for Big Data (sketching, streaming)
- Clustering (k-means, spectral clustering, kernel methods)
- Latent Variable Models (topic models, hidden Markov models, graphic models)

Text: *Foundations of Data Science* by Avrim Blum, John Hopcroft, and Ravindran Kannan, Cambridge University Press, 2020.

Alternative Text: *Machine Learning: A Probabilistic Perspective* by Kevin P. Murphy, MIT Press, 2012.