Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all of the following
- Complete all the following:
  - COMMST227 - Leadership (0.50)
- Complete 4 of the following:
  - COMMST201 - Introduction to Gender and Sexuality in Communication (0.50)
  - COMMST301 - Topics in Gender and Sexuality in Communication (0.50)
  - COMMST302 - Topics in Race, Culture, and Communication (0.50)
  - COMMST323 - Speech Writing (0.50)
  - COMMST335 - Power, Agency, Community (0.50)
  - COMMST401 - Advanced Gender and Sexuality in Communication (0.50)
  - COMMST402 - Advanced Race, Culture, and Communication (0.50)
  - COMMST420 - Persuasion (0.50)
  - COMMST430 - Communication and Social Justice (0.50)
  - COMMST432 - Conflict Management (0.50)
  - COMMST471 - Communication, Resistance, and Social Change (0.50)
  - COMMST475 - Communication Ethics (0.50)
  - ENGL309E - Speech Writing (0.50)
  - GSJ202 - Introduction to Gender and Sexuality in Communication (0.50)
  - LS471 - Communication, Resistance, and Social Change (0.50)
  - LS492 - Communication and Social Justice (0.50)

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set
2. At least 0.5 units of the selected courses in the above list must be at the 400-level.

Notes

- Visit the Department of Communication Arts website for further information.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Arts

Dependencies

Strategic Communication Specialization - Strategic Communication Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Quality Assurance Designation
Major Modification Qad

Major Modification Categories

Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials

Yes,

Co-operative System of Study and Requirements

No,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for New Program/Plan

This specialization will help clarify the specific pedagogical, social, and professional advantages of a degree in communication studies focused on purposeful work in organizational settings, recruit new students interested in professional and organizational success, and help graduating students articulate the purpose and significance of the courses in their communication studies major. Strategic communication is now a widely recognized sub-field in communication studies, and this specialization can leverage the growing popularity of that sub-field and sharpen the end goals of an undergraduate degree in the broader field of communication.

General Program/Plan Information

Faculty

Faculty of Arts

Academic Unit

Department of Communication Arts

Faculty
Faculty of Arts

Undergraduate Credential Type
Specialization

Program/Plan Name
Strategic Communication Specialization

Admissions

Specialization is available for students in the following majors

H-Communication Studies

Admissions Entry Point
Declare Plan,

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all of the following
- Complete all the following:
  - COMMST227 - Leadership (0.50)
- Complete 4 of the following:
  - COMMST225 - Interviewing (0.50)
  - COMMST323 - Speech Writing (0.50)
  - COMMST324 - Small Group Communication (0.50)
  - COMMST325 - Organizational Communication (0.50)
  - COMMST329 - Designing Digital Presentations (0.50)
  - COMMST420 - Persuasion (0.50)
  - COMMST431 - Crisis Communication (0.50)
  - COMMST432 - Conflict Management (0.50)
  - COMMST433 - The Organizational Consultant (0.50)
  - DAC248 - Project Management in the Arts (0.50)
  - DAC329 - Designing Digital Presentations (0.50)
  - ENGL309E - Speech Writing (0.50)

- THPERF248 - Project Management in the Arts (0.50)

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. At least 1.0 units of the selected courses in the above list must be at the 400-level.

Notes

- Visit the Department of Communication Arts website for further information.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Arts

Dependencies

Theatre & Performance Studies Specialization - Theatre and Performance Studies Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-06-25

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
No,

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

The Theatre and Performance Studies specialization addresses the needs of students who seek to integrate performance practice with rigorous scholarly inquiry, critical theory, and dramaturgy. While some students enter our program focused on acting or technical work, many discover their passion lies in understanding theatre's cultural, historical, and social dimensions - pursuing questions about how

performance creates meaning, how theatre intersects with politics and identity, and how dramatic literature shapes and reflects society. This specialization provides a dedicated pathway for students interested in dramaturgy, directing, theatre criticism, education, and graduate study, offering a transcript designation that signals comprehensive training in both performance and scholarship.
The specialization prepares students who can move fluidly between embodied practice and critical analysis, understanding theatre as both an art form and a subject of academic inquiry. By integrating acting, devising, and performance creation with theatre history, dramatic theory, and cultural studies, we develop graduates who possess both practical theatre-making skills and the analytical frameworks to contextualize their work.
Students develop sophisticated abilities to articulate the social and ethical dimensions of theatrical work through engagement with critical theory applied to practice. They examine how theatrical representation constructs identity, how performance can function as activism, and how theatre histories have been shaped by colonization and power structures. In practical contexts, they apply these frameworks to create socially engaged work, develop educational programming and outreach, and advocate for inclusive, anti-oppressive theatre practices. This combination produces graduates prepared for diverse career paths including graduate school, arts education, dramaturgy, arts journalism, cultural programming, and community-based performance work.
The four-year progressive structure ensures students graduate with both the practical competencies and theoretical sophistication needed to succeed as scholar-practitioners who bridge academic and professional theatre contexts.

Consultations (Departmental)

Emailed the English Language and Literature's Undergraduate Associate Chair August 21, 2025 to add ENGL362, ENGL363, ENGL364, ENGL367 to this specialization.

Emailed the Black Studies Director on August 21, 2025 to add BLKST102, BLKST224, BLKST380 to this specialization.

General Program/Plan Information

Faculty

Faculty of Arts

Academic Unit

Department of Communication Arts

Faculty
Faculty of Arts

Undergraduate Credential Type
Specialization

Program/Plan Name
Theatre and Performance Studies Specialization

Admissions

Specialization is available for students in the following majors

H-Theatre & Performance

Admissions Entry Point
Declare Plan,

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.0 units.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete 4 of the following:
- BLKST102 - Introduction to Black Arts, Culture, and Literature (0.50)
- BLKST224 - Black Performance Studies (0.50)
- BLKST380 - Black Theatre in Practice (0.50)
- COMMST112 - Introduction to Black Arts, Culture, and Literature (0.50)
- COMMST220 - Performance Studies (0.50)
- COMMST224 - Black Performance Studies (0.50)
- COMMST326 - Performing the Voice (0.50)
- COMMST440 - Performative Inquiry and Practice (0.50)
- ENGL362 - Shakespeare 1 (0.50)
- ENGL363 - Shakespeare 2 (0.50)
- ENGL364 - Shakespeare in Performance at the Stratford Festival (0.50)
- ENGL367 - Voice and Text at the Stratford Festival (0.50)
- THPERF112 - Introduction to Black Arts, Culture, and Literature (0.50)
- THPERF220 - Performance Studies (0.50)
- THPERF221 - Performing Text (0.50)
- THPERF222 - Performing the Body (0.50)
- THPERF224 - Black Performance Studies (0.50)
- Course Not Found
- THPERF282 - Gender and Performance (0.50)
- Course Not Found
- THPERF301 - Performance Creation (0.50)
- THPERF321 - Approaches to Acting with Text (0.50)
- THPERF322 - Approaches to Acting with the Body (0.50)
- THPERF326 - Performing the Voice (0.50)
- THPERF361 - Approaches to Directing (0.50)
- THPERF364 - Shakespeare in Performance at the Stratford Festival (0.50)
- THPERF366 - Writing for Performance (0.50)
- THPERF367 - Voice and Text at the Stratford Festival (0.50)
- THPERF376 - Political Performance (0.50)
- Course Not Found
- THPERF378 - Race and Performance (0.50)
- THPERF380 - Black Theatre in Practice (0.50)
- THPERF386 - Shakespeare 1 (0.50)
- THPERF387 - Shakespeare 2 (0.50)
- Course Not Found
- THPERF440 - Performative Inquiry and Practice (0.50)
- VCULT112 - Introduction to Black Arts, Culture, and Literature (0.50)

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Notes

- Visit the Department of Communication Arts website for further information.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Arts

Dependencies

Business Economics Minor - Business Economics Minor

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-02-21

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

The Faculty of Mathematics was consulted about the Invalid Credential Combination with the Mathematical Economics (Bachelor of Mathematics - Honours). All other Invalid Credential Combinations are within the Department of Economics.

Change to Learning Outcomes

No,

Rationale and Background for New Program/Plan

This rationale is identical for the Minor in Economic Policy and the Minor in Business Economics. We believe that the two minors serve the same purpose.

1. The current minor in Economics does not serve student needs as well as we would like. Economics is a very broad field, and the minor consequently lacks learning outcomes to which students can translate to acquired or transferable skills when seeking employment. We believe that minors with well-defined learning objectives better serve students' goals and learning experience, and make advising more efficient. This minor will serve students whose main interests are in economic analysis and initiatives within the business world.
2. We will maintain the current minor in Economics until we are able to measure the success of the minors proposed in this agenda.
3. This new minor, along with the proposed minor in Economic Policy, will serve as a means through which students who are not able to succeed in the Economics major (usually because they struggle with courses that require advanced math) will be able to obtain salient expertise in important fields of Economics. In order to ensure that this group of students has a fair chance at success in this minor, the average for the purposes of Academic Progression and graduation will include only courses taken toward the credential, and not all of the ECON courses they have taken.

In addition to the students described above, we believe that many students with majors in any faculty may benefit from taking this minor, as the learning outcomes and requirements do not require expertise in math above what they have had in secondary school.

Consultations (Departmental)

- We consulted with Engineering (Jason Grove, Derek Rayside and Ben Chen) about including several engineering courses in the list. They showed interest in the minor, so we decided to include equivalent courses that they offer, to simplify the completion of the minor for their students. The courses they recommended to add to the minor include:
  - MSE263, which is equivalent to ECON101.
  - MSE261, which is equivalent to ECON371.
  - MSE454 and MSE422, which are valid electives for a minor in business economics.

General Program/Plan Information

Faculty

Faculty of Arts

Academic Unit

Department of Economics

Faculty
Faculty of Arts

Undergraduate Credential Type
Minor

Program/Plan Name
Business Economics Minor

Admissions

Admissions Entry Point
Declare Plan,

Declaration Audience
This credential is open to students enrolled in any degree program.

Declaration Requirements

- A minimum average of 65.0% in at least two of the courses from the list of requirements.

Requirements Information

Invalid Combinations
Yes,

List of Invalid Combinations

Economics (Bachelor of Arts - Honours)

Economics (Bachelor of Arts - Four-Year General)

Mathematical Economics (Bachelor of Mathematics - Honours)

Mathematical Economics (Bachelor of Arts - Honours)

Economics Minor

Economic Theory Minor

Econometrics and Data Analysis Minor

Economic Policy Minor

Average Requirement
Yes,

Minimum Average(s) Required

- A minimum cumulative minor average of 65.0%.

Graduation Requirements

- Complete a total of 4.0 units.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all of the following
- Complete all the following:
  - ECON201 - Microeconomic Theory for Business and Policy (0.50)
- Complete 1 of the following
  - Complete all of the following
    - Complete 1 of the following:
      - COMM103 - Principles of Economics (0.50)
      - ECON100 - Principles of Economics (0.50)
    - Complete 2.0 units from the Approved Courses list
  - Complete all of the following
    - Complete 1 of the following:
      - ECON101 - Introduction to Microeconomics (0.50)
      - ECON120W - Introduction to Microeconomics (WLU) (0.50)
      - MSE263 - Managerial Economics (0.50)
    - Complete 1 of the following:
      - ECON102 - Introduction to Macroeconomics (0.50)
      - ECON140W - Introduction to Macroeconomics (WLU) (0.50)
    - Complete 1.5 units from the Approved Courses list
- Complete 1 of the following:
  - AFM272 - Global Capital Markets and Financial Analytics (0.50)
  - AFM273 - Financial Instruments and Capital Markets (0.50)
  - AFM274 - Introduction to Corporate Finance (0.50)
  - AFM275 - Corporate Finance (0.50)
  - ECON371 - Business Finance 1 (0.50)
- Complete 1 of the following:
  - ACTSC446 - Mathematics of Financial Markets (0.50)
  - AFM322 - Derivative Securities (0.50)
  - ECON372 - Business Finance 2 (0.50)
  - MATBUS470 - Derivatives (0.50)

Course Lists

Approved Courses List

- Choose any of the following:
- ARBUS200 - Entrepreneurship Principles and Practices (0.50)
- ECON206 - Money and Banking 1 (0.50)
- ECON212 - Introduction to Game Theory (0.50)
- ECON231 - Introduction to International Economics (0.50)
- ECON254 - Economics of Sport (0.50)
- ECON332 - International Finance (0.50)
- ECON361 - Cost-Benefit Analysis and Project Evaluation (0.50)
- ENBUS203 - Green Entrepreneurship (0.50)
- MGMT220 - Entrepreneurship and the Creative Workplace (0.50)
- MGMT244 - Principles of Marketing (0.50)
- MGMT345 - Marketing Strategy (0.50)

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. A minimum of 2.0 units must be ECON courses.

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines
Yes,

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Arts

Dependencies

Econometrics & Data Analysis Minor - Econometrics and Data Analysis Minor

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-02-21

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
Yes,

Invalid Combinations Consultations

The Faculty of Mathematics was consulted about the Invalid Credential Combination with the Mathematical Economics (Bachelor of Mathematics - Honours). All other Invalid Credential Combinations are within the Department of Economics.

Change to Learning Outcomes

No,

Rationale and Background for New Program/Plan

1. There is high demand from students and employers for capacity in data analysis.
2. At present, the only credential we offer in econometrics is a specialization only open to Economics majors. This minor will offer a means for students outside the Economics major to attain skills in econometrics (the use of statistical methods to analyze economic data) and data analysis related to economic theory, forecasting, and modelling.
3. Because of the broad applicability of these capacities, we believe the minor will be attractive to students across the University.
4. The courses that are required for the minor are regularly offered, and there is typically room for additional enrolments in them.

Consultations (Departmental)

- We consulted with Engineering (Jason Grove, Derek Rayside and Ben Chen) about including several engineering courses in the list. They showed interest in the minor, so we decided to include equivalent courses that they offer, to simplify the completion of the minor for their students. The courses they recommended to add to the minor include:
  - MSE263, which is equivalent to ECON101.
  - MSE253, CHE225, ECE307 and SYDE334, which are equivalent to any introduction to econometrics.
  - MSE251 and 11 more engineering courses, as valid introduction to statistics.
- 2026-01-19 Statistics and Actuarial Science Associate Chair Cecilia Cotton approved addition of STAT202, STAT206, STAT220, STAT221, STAT230, STAT231, STAT240, STAT241.

General Program/Plan Information

Faculty

Faculty of Arts

Academic Unit

Department of Economics

Faculty

Faculty of Arts

Undergraduate Credential Type

Minor

Program/Plan Name
Econometrics and Data Analysis Minor

Admissions

Admissions Entry Point
Declare Plan,

Declaration Audience
This credential is open to students enrolled in any degree program. This credential is open to students enrolled in any non- or post-degree academic plan.

Declaration Requirements

- A minimum average of 65.0% in at least two of the courses from the list of requirements.

Requirements Information

Invalid Combinations

Yes,

List of Invalid Combinations

Economics Minor | Economic Theory Minor

Economics (Bachelor of Arts - Honours)

Mathematical Economics (Bachelor of Arts - Honours)

Economics (Bachelor of Arts - Four-Year General)

Mathematical Economics (Bachelor of Mathematics - Honours)

Business Economics Minor

Economic Policy Minor

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative minor average of 65.0%.

Graduation Requirements

- Complete a total of 4.0 units.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all of the following
- Complete 1 of the following
    - Complete all of the following
        - Complete 1 of the following:
            - COMM103 - Principles of Economics (0.50)
            - ECON100 - Principles of Economics (0.50)
        - Complete 0.5 unit from the Approved Courses list
    - Complete all of the following

        - Complete 1 of the following:
            - ECON101 - Introduction to Microeconomics (0.50)
            - ECON120W - Introduction to Microeconomics (WLU) (0.50)
            - MSE263 - Managerial Economics (0.50)
        - Complete 1 of the following:
            - ECON102 - Introduction to Macroeconomics (0.50)
            - ECON140W - Introduction to Macroeconomics (WLU) (0.50)
- Complete 1 of the following:
    - AE224 - Probability and Statistics (0.50)
    - AFM113 - Analytic Methods for Business 2 (0.50)
    - ARTS280 - Statistics for Arts Students (0.50)
    - BME213 - Statistics and Experimental Design (0.50)
    - CHE220 - Probability and Statistics (0.50)
    - CIVE224 - Probability and Statistics (0.50)
    - ECE203 - Probability Theory and Statistics 1 (0.50)
    - ECON221 - Statistics for Economists (0.50)
    - ENVE224 - Probability and Statistics (0.50)
    - GEOE224 - Probability and Statistics (0.50)
    - LS280 - Social Statistics (0.50)
    - ME202 - Statistics for Engineers (0.50)
    - MSE251 - Probability and Statistics 1 (0.50)
    - NE215 - Probability and Statistics (0.50)
    - PSCI314 - Quantitative Analysis (0.50)
    - PSYCH292 - Basic Data Analysis (0.50)
    - SDS250R - Social Statistics (0.50)
    - SOC280 - Social Statistics (0.50)
    - SRF230 - Introduction to Statistics (0.50)
    - STAT202 - Introductory Statistics for Scientists (0.50)
    - STAT206 - Statistics for Software Engineering (0.50)
    - STAT220 - Probability (Non-Specialist Level) (0.50)
    - STAT230 - Probability (0.50)
    - STAT240 - Probability (Advanced Level) (0.50)
- Complete 1 of the following:
    - AFM323 - Quantitative Foundations for Finance (0.50)
    - CHE225 - Design of Experiments for Process Improvement (0.50)
    - ECE307 - Probability Theory and Statistics 2 (0.50)
    - ECON322 - Econometric Analysis 1 (0.50)
    - MSE253 - Probability and Statistics 2 (0.50)
    - STAT221 - Statistics (Non-Specialist Level) (0.50)
    - STAT231 - Statistics (0.50)
    - STAT241 - Statistics (Advanced Level) (0.50)
    - SYDE334 - Applied Statistics (0.50)
- Complete all the following:
    - ECON323 - Econometric Analysis 2 (0.50)
- Complete 3 of the following:
    - ECON421 - Econometric Theory (0.50)
    - ECON422 - Microeconometric Analysis (0.50)
    - ECON423 - Time Series Econometrics (0.50)
    - ECON424 - Machine Learning in Economics (0.50)
    - ECON425 - Topics in Econometrics (0.50)

Course Lists

Approved Courses List

- Choose any of the following:
- ECON201 - Microeconomic Theory for Business and Policy (0.50)

- ECON206 - Money and Banking 1 (0.50)
- ECON207 - Economic Growth and Development 1 (0.50)
- ECON212 - Introduction to Game Theory (0.50)
- ECON231 - Introduction to International Economics (0.50)
- ECON241 - Introduction to Public Economics (0.50)
- ECON255 - Introduction to Environmental and Natural Resource Economics (0.50)
- ECON256 - Introduction to Health Economics (0.50)
- ECON261 - Philosophy of Economics (0.50)
- ECON262 - History of Economic Thought (0.50)
- ECON351 - Labour Economics (0.50)
- ECON366 - Gender and Economics (0.50)

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. A minimum of 2.0 units must be ECON courses.

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines
Yes,

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Arts

Dependencies

Economic Policy Minor - Economic Policy Minor

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-02-21

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
Yes,

Invalid Combinations Consultations

The Faculty of Mathematics was consulted about the Invalid Credential Combination with the Mathematical Economics (Bachelor of Mathematics - Honours). All other Invalid Credential Combinations are within the Department of Economics.

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

1. The current minor in Economics does not serve student needs as well as we would like. Economics is a very broad field, and the minor consequently lacks learning outcomes to

which students can translate to acquired or transferable skills when seeking employment. We believe that minors with well-defined learning objectives better serve students' goals and learning experience, and make advising more efficient. This minor will serve students whose main interests are in analyzing the role of government in the economy, exploring how public policies affect economic behavior, resource allocation, and social welfare.
2. We will maintain the current minor in Economics until we are able to measure the success of the minors proposed in this agenda.
3. This new minor, along with the proposed minor in Business Economics, will serve as a means through which students who are not able to succeed in the Economics major (usually because they struggle with courses that require advanced math) will be able to obtain salient expertise in important fields of Economics. In order to ensure that this group of students has a fair chance at success in this minor, the average for the purposes of Academic Progression and graduation will include only courses taken toward the credential, and not all of the ECON courses they have taken.

In addition to the students described above, we believe that many students with majors in any faculty may benefit from taking this minor, as the learning outcomes and requirements do not require expertise in math above what they have had in secondary school.

Consultations (Departmental)

- We consulted with Engineering (Jason Grove, Derek Rayside and Ben Chen) about including several engineering courses in the list. They showed interest in the minor, so we decided to include equivalent courses that they offer, to simplify the completion of the minor for their students. For this particular minor, only MSE263 was added. It is equivalent to ECON101.

General Program/Plan Information

Faculty

Faculty of Arts

Academic Unit

Department of Economics

Faculty
Faculty of Arts

Undergraduate Credential Type
Minor

Program/Plan Name
Economic Policy Minor

Admissions

Admissions Entry Point
Declare Plan,

Declaration Audience
This credential is open to students enrolled in any degree program. This credential is open to students enrolled in any non- or post-degree academic plan.This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.

Declaration Requirements

- A minimum average of 65.0% in at least two of the courses from the list of requirements.

Requirements Information

Invalid Combinations
Yes,

List of Invalid Combinations

Economics Minor

Economics (Bachelor of Arts - Honours)

Economics (Bachelor of Arts - Four-Year General)

Economic Theory Minor

Mathematical Economics (Bachelor of Mathematics - Honours)

Mathematical Economics (Bachelor of Arts - Honours)

Business Economics Minor

Econometrics and Data Analysis Minor

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative minor average of 65.0%.

Graduation Requirements

- Complete a total of 4.0 units.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all of the following
- Complete all the following:
  - ECON201 - Microeconomic Theory for Business and Policy (0.50)
  - ECON207 - Economic Growth and Development 1 (0.50)
  - ECON241 - Introduction to Public Economics (0.50)
- Complete 1 of the following
  - Complete all of the following
    - Complete 1 of the following:
      - COMM103 - Principles of Economics (0.50)
      - ECON100 - Principles of Economics (0.50)
    - Complete 2.0 units from the Approved Courses list
  - Complete all of the following
    - Complete all of the following
      - Complete 1 of the following:
        - ECON101 - Introduction to Microeconomics (0.50)
        - ECON120W - Introduction to Microeconomics (WLU) (0.50)

        - MSE263 - Managerial Economics (0.50)
      - Complete of the following:
        - ECON102 - Introduction to Macroeconomics (0.50)
        - ECON140W - Introduction to Macroeconomics (WLU) (0.50)
    - Complete 1.5 units from the Approved Courses list

Course Lists

Approved Courses List

- Choose any of the following:
- ECON206 - Money and Banking 1 (0.50)
- ECON231 - Introduction to International Economics (0.50)
- ECON254 - Economics of Sport (0.50)
- ECON255 - Introduction to Environmental and Natural Resource Economics (0.50)
- ECON256 - Introduction to Health Economics (0.50)
- ECON261 - Philosophy of Economics (0.50)
- ECON262 - History of Economic Thought (0.50)
- ECON351 - Labour Economics (0.50)
- ECON361 - Cost-Benefit Analysis and Project Evaluation (0.50)
- ECON363 - The Economics of Social Problems (0.50)
- ECON366 - Gender and Economics (0.50)
- ECON437 - Urban Economics (0.50)
- ECON458 - Water Resource Economics (0.50)
- ECON467 - Canadian Economic History (0.50)

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines
Yes,

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Arts

Dependencies

Top

UG-ARTS-Averages and Academic Standings -

Arts: Averages and Academic Standings

Effective Date & Career

Career
Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2025

Proposal Details

Proposal Type
Change,

Rationale and Background

Students who continually overload on non-Arts courses risk jeopardizing academic progression. The changes to the Academic Standings section reflect the expectation that students are progressing toward their Bachelor of Arts degree requirements. Academic progression for these students is reviewed by the Arts Undergraduate Office. The other changes are intended to clarify average requirements and procedures of standings.

Changes were approved at Arts Academic Regulations Committee on May 26, 2025.

A section for the combined Bachelor of Arts (BA) in Social Development Studies (SDS) and Bachelor of Social Work (BSW) is being added since the progression rules don't fall into the typically Bachelor of Arts progression. This addition is a result of the new SDS and BSW double degree.

Please see attachment.

Supporting Documentation

- UG-ARTS-Averages and Academic Standings changes 1.docx

General Regulation Information

Type of Regulation
Faculty-specific,

Faculty
Faculty of Arts

Regulation Page Name
Arts: Averages and Academic Standings

Description
Readmission after failed standing, average definitions, academic standings, Foundation Term

Regulation Details

Proposed

Regulation Details

Averages

- **Cumulative Overall Average (CAV):** Average of the grades in all courses taken regardless of faculty.
- **Faculty (Arts) Average (FAV):** Average of the grades in all Faculty of Arts courses.
  - Does not include courses with the following subject codes: BASE, EFAS, SWREN, UNIV.
- **Major Average (MAV):** Average of the grades in all courses taken within the student's major.
  - All courses taken under the subject code of the student's major and those courses listed under the plan-level requirements are included in the major average regardless of whether any of these courses are in excess of the minimum required by the major.
- **Term Average:** Average of the grades in all courses taken within a particular academic term.
- **Minor Average:** Average of the grades in all courses taken within the student's minor.
  - All courses taken under the subject code of the student's minor and those courses listed as optional requirements are included in the minor average regardless of whether any of these courses is in excess of the minimum required by the minor.
  - Cross-listed courses count towards the minor average in the same way they do for the major average (see below for details).
- **Diploma Average:** Average of the grades in all courses taken within the student's diploma.
  - All courses taken under the subject code of the student's diploma and those courses listed as optional requirements are included in the diploma average regardless of whether any of these courses is in excess of the minimum required by the diploma.
  - Cross-listed courses count towards the diploma average in the same way they do for the major average (see below for details).

Cross-listed Courses in Calculation of Averages

- Any course taken (under any subject code) which was cross-listed with a course in a student's plan in the Undergraduate Calendar they are following (that is, is included in their requirement term) is included in the plan average. For example, a Psychology student enrolled

in PHIL256 (cross-listed with PSYCH256) will have the course grade counted towards the Psychology plan average only if PHIL256/PSYCH256 was cross-listed in their requirement term. If a course is later cross-listed and a student takes the course when it is cross-listed, it will not count in the plan average unless a student changes their requirement term to a term in which the course is cross-listed. For example, if PHIL256 was de-cross-listed from PSYCH256, PHIL256 would continue to count in the student's plan average unless they switched their Psychology requirements to a later requirement term, when the pair is no longer cross-listed, at which point it would stop counting. Similarly, if PHIL256 was not cross-listed at the time the student took the course, but became cross-listed and the student opted in to a newer Psychology requirement term, PHIL256 would now count towards the plan average.
- Cross-listed courses in a different faculty will not be included in the Faculty of Arts average (FAV).
- Cross-listed courses in a different faculty taken to fulfil Arts major plan requirements will be included in the corresponding MAV.

Notes

1. For Wilfrid Laurier University courses, see Wilfrid Laurier University Cross-Registration.
2. Students who have received transfer credit(s) or had grades cleared should refer to Transfer Information for further details.
3. Liberal Studies plans function as majors for the purposes of plan-level requirements, calculation of averages, academic progression, and plan combinations.

Academic Standings

Academic standing is a measure of the student's academic achievement relative to their degree requirements, and determines their eligibility to be admitted to and/or proceed in their academic plan and to qualify for graduation.

A student's academic standing is determined by the averages attained in the Cumulative Overall Average (CAV), Faculty (Arts) Average (FAV), and Major Average (MAV).

Students who meet the cumulative and major average requirements will be in Excellent, Good, or Satisfactory standing. Failure to meet average requirements may result in a Conditional or Failed standing, or a decision to proceed to an alternate plan for which the student qualifies. Students in conditional standing are required to speak with their academic advisor for advice to increase the likelihood of success in the conditional term.

Even while otherwise in satisfactory standing, a student who fails four or more academic courses in any academic year may be required to withdraw if the Arts Examinations and Standings Committee considers that the student will not profit by further study. Additionally, students must demonstrate progress toward completing their Bachelor of Arts degree requirements by successfully completing courses in the Faculty of Arts and/or in their major. Failure to do so may result in removal from the academic plan.

First-year students with a Faculty of Arts average below 65% and/or cumulative average below 60% may be required to withdraw for two consecutive academic terms.

Students can find their term grades in Quest and academic standing on their unofficial transcripts.

Bachelor of Accounting and Financial Management

To be in satisfactory standing in **Bachelor of Accounting and Financial Management (BAFM), Honours**, a student must maintain:

- a minimum cumulative average of 70% in the courses specified for the BAFM degree requirements, **and**
- a minimum cumulative overall average of 60%.

For further information, consult the School of Accounting and Finance website.

Bachelor of Arts

Year One Students

To be in satisfactory standing in **General Arts Year One**, a student must maintain:

- a minimum cumulative average of 65% in all Faculty of Arts courses, **and**
- a minimum cumulative overall average of 60%.

To be in satisfactory standing in **Honours Arts Year One**, a student must maintain:

- a minimum cumulative average of 70% in the potential major (end of 1B term), **and**
- a minimum cumulative overall average of 60%.

To be in satisfactory standing in **Honours Arts and Business**, a student must maintain:

- a minimum cumulative average of 70% in the potential major (end of 1B term), **and**
- a minimum cumulative average of 70% in the Arts and Business group of courses, **and**
- a minimum cumulative overall average of 60%.

Upper-Year Students

To be in satisfactory standing in a **general plan**, a student must maintain:

- a minimum cumulative average of 65% in all courses taken in the major, or a minimum cumulative average of 65% in all Arts courses in Liberal Studies, **and**
- a minimum cumulative overall average of 60%.

To be in satisfactory standing in an **honours plan**, a student must maintain:

- a minimum cumulative overall average of 60%, **and**
- a minimum cumulative average of 70% in all courses taken in the honours major, or a minimum cumulative average of 70% in all Arts courses in Liberal Studies, **or**
- a minimum cumulative average of 75% in all courses taken in the Honours Intensive Specialization major.

A student pursuing an honours double major must maintain a minimum cumulative average of 70% in all courses taken in each honours major. A student pursuing a joint honours major should consult the plan requirements and academic standing regulations listed for the appropriate faculty.

To be in satisfactory standing in **Honours Arts and Business (co-op and regular)**, a student must maintain (in addition to the honours plans requirement) a minimum cumulative average of 70% in the Arts and Business group of courses.

Bachelor of Arts (Social Development Studies) and Bachelor of Social Work Double Degree

To be in satisfactory standing in a **Bachelor of Arts (Social Development Studies) and Bachelor of Social Work (BSW) Double Degree, general plan**, a student must maintain:

- a minimum cumulative major average of 65% as stipulated by the plan requirements, **and**
- a minimum cumulative special major average of 75% as stipulated by the plan requirements, **and**
- a minimum cumulative overall average of 60%.

To be in satisfactory standing in a **Bachelor of Arts (Social Development Studies) and Bachelor of Social Work (BSW) Double Degree, Honours**, a student must maintain:

- a minimum cumulative major average of 70% as stipulated by the plan requirements, **and**
- a minimum cumulative special major average of 75% as stipulated by the plan requirements, **and**
- a minimum cumulative overall average of 60%

Bachelor of Computing and Financial Management

To be in good standing in **Bachelor of Computing and Financial Management (BCFM), Honours**, a student must maintain:

- a minimum cumulative average of 70% in the required courses from the Faculty of Arts and

any free choice courses taken from the Faculty of Arts, **and**
- a minimum cumulative average of 60% in the required courses from the Faculty of Mathematics and any free choice courses taken from the Faculty of Mathematics, **and**
- a minimum cumulative overall average of 60%.

Failure to meet the minimum standing for the plan, more than two academic course units (four courses) of failed/excluded courses, or a difference of more than five academic course units (10 courses) between units attempted and units completed, may result in a Conditional standing, a Required to Withdraw - May Not Continue in Faculty standing, or a standing to proceed to an alternate plan for which the student qualifies.

Bachelor of Global Business and Digital Arts

To be in satisfactory standing in **Bachelor of Global Business and Digital Arts (BGBDA), Honours**, a student must maintain:

- a minimum cumulative average of 70% in the courses specified for the BGBDA degree requirements, **and**
- a minimum cumulative overall average of 60%.

Bachelor of Sustainability and Financial Management

To be in satisfactory standing in **Bachelor of Sustainability and Financial Management (BSFM), Honours,** a student must maintain:

- a minimum cumulative average of 70% in the courses specified for the BSFM degree requirements, **and**
- a minimum cumulative overall average of 60%.

For further information, consult the School of Accounting and Finance website.

Non-Degree Program

To be in satisfactory standing, a non-degree student must maintain a minimum cumulative Faculty of Arts average of 65%.

In the following instances, a student can be registered as a non-degree student yet receive no academic standing decision:

- Students from other universities studying on a Letter of Permission basis.
- Students from other universities studying on an approved international exchange.
- Students who elect to proceed with studies despite having been assigned a Failed - Required to Withdraw standing decision in the previous term.

Post-Degree Program

Post-degree students must maintain a minimum cumulative overall average of 60%.

Foundation Term

The Foundation Term aims to assist students in continuing their studies at the University of Waterloo with more success. Refer to Arts specific Foundation Term information.

Students who receive a Failed academic standing at the end of their first or second term of study who apply for readmission may complete the Foundation Term after a minimum one-term absence.

Normally, students in 2A or above who receive their first Failed academic standing decision may apply for readmission to the University of Waterloo after an absence of two consecutive terms (eight months).

For more information, contact the Arts Undergraduate Office.

Readmission Following a Failed Academic Standing Decision

Required to Withdraw Decision in Arts

A student who has received a **Failed - Required to Withdraw** academic standing decision at the end of their first or second term of study should consult with their academic advisor. Normally, the student will first complete the Foundation Term or absent themselves for two terms. See The Centre website for information about the courses taken during a Foundation Term.

A student who has received a **Failed - Required to Withdraw** academic standing decision is eligible to apply for readmission after an absence of two terms (with the exception of first-year students who may be eligible for the Foundation Term).

To apply for readmission, a student must first complete an Application for Undergraduate Readmission within the specified deadlines.

Notes

1. Students contemplating readmission after receiving a Failed decision are strongly encouraged to consult the Arts Undergraduate Office prior to application.
2. Students contemplating readmission should take into consideration course selection dates when determining when to re-apply as course availability may be affected.

If a Student is Granted Readmission

- All previous University of Waterloo course attempts and grades will remain recorded on the student's transcript.
  - The student's cumulative overall and Arts (or major) averages will be **cleared**, that is, grades achieved in all previous course work will not count in cumulative averages.
  - Previous course work, where it is applied to degree requirements, is considered transfer credit and subject to transfer credit regulations.
- It is the student's responsibility to inform themselves of their transferred credits by meeting with an academic advisor, reading the transfer credit letter issued to them upon readmission, and viewing their unofficial transcript in Quest.

To fulfil degree requirements for graduation, students whose cumulative averages have been cleared must observe the following requirements:

- Cumulative and Arts (or major) averages for the degree will be based on courses taken following readmission and clearing.
- For a three-year degree, complete a minimum of 7.5 additional academic course units (15 courses).
- For a four-year degree, complete a minimum of 10 additional academic course units (20 courses).
- Complete at least half of the total number of University of Waterloo Arts courses required in the major.
  - For Three-Year General Liberal Studies, at least four academic course units (eight courses) must be University of Waterloo Arts courses.
  - For Four-Year General and Honours Liberal Studies, at least 6.5 academic course units (13 courses) must be University of Waterloo Arts courses.

Failed - May not Continue in Faculty Decision in Arts

In the event a student receives a **Failed - May not Continue in Faculty** academic standing in Arts, an application for readmission will normally not be considered until a period of at least five years has elapsed. Readmission is not guaranteed.

Existing

Regulation Details

Averages

- **Cumulative Overall Average (CAV):** Average of the grades in all courses taken regardless of faculty.
- **Faculty (Arts) Average (FAV):** Average of the grades in all Faculty of Arts courses.

    - Does not include courses with the following subject codes: BASE, EFAS, SWREN, UNIV.
- **Major Average (MAV):** Average of the grades in all courses taken within the student's major.
    - All courses taken under the subject code of the student's major and those courses listed under the plan-level requirements are included in the major average regardless of whether any of these courses are in excess of the minimum required by the major.
- **Term Average:** Average of the grades in all courses taken within a particular academic term.
- **Minor Average:** Average of the grades in all courses taken within the student's minor.
    - All courses taken under the subject code of the student's minor and those courses listed as optional requirements are included in the minor average regardless of whether any of these courses is in excess of the minimum required by the minor.
    - Cross-listed courses count towards the minor average in the same way they do for the major average (see below for details).
- **Diploma Average:** Average of the grades in all courses taken within the student's diploma.
    - All courses taken under the subject code of the student's diploma and those courses listed as optional requirements are included in the diploma average regardless of whether any of these courses is in excess of the minimum required by the diploma.
    - Cross-listed courses count towards the diploma average in the same way they do for the major average (see below for details).

Cross-listed Courses in Calculation of Averages

- Any course taken (under any subject code) which was cross-listed with a course in a student's plan in the Undergraduate Calendar they are following (that is, is included in their requirement term) is included in the plan average. For example, a Psychology student enrolled in PHIL256 (cross-listed with PSYCH256) will have the course grade counted towards the Psychology plan average only if PHIL256/PSYCH256 was cross-listed in their requirement term. If a course is later cross-listed and a student takes the course when it is cross-listed, it will not count in the plan average unless a student changes their requirement term to a term in which the course is cross-listed. For example, if PHIL256 was de-cross-listed from PSYCH256, PHIL256 would continue to count in the student's plan average unless they switched their Psychology requirements to a later requirement term, when the pair is no longer cross-listed, at which point it would stop counting. Similarly, if PHIL256 was not cross-listed at the time the student took the course, but became cross-listed and the student opted in to a newer Psychology requirement term, PHIL256 would now count towards the plan average.
- Cross-listed courses in a different faculty will not be included in the Faculty of Arts average (FAV).
- Cross-listed courses in a different faculty taken to fulfil Arts major plan requirements will be included in the corresponding MAV.

Notes

1. For Wilfrid Laurier University courses, see Wilfrid Laurier University Cross-Registration.
2. Students who have received transfer credit(s) or had grades cleared should refer to Transfer Information for further details.
3. Liberal Studies plans function as majors for the purposes of plan-level requirements, calculation of averages, academic progression, and plan combinations.

Academic Standings

Academic standing is a measure of the student's academic achievement relative to their degree requirements, and determines their eligibility to be admitted to and/or proceed in their academic plan and to qualify for graduation.

A student's academic standing is determined by the averages attained in the Cumulative Overall Average (CAV), Faculty (Arts) Average (FAV), and Major Average (MAV).

Students who meet the academic requirements for their major will be in Excellent, Good, or Satisfactory standing, depending on the major and their term and overall averages. Failure to meet minimum cumulative average requirements for the major may result in a Conditional or Failed standing, or a decision to proceed to an alternate plan for which the student qualifies. Students in conditional standing are required to speak with their academic advisor for advice to increase the likelihood of success in the conditional term.

Even while otherwise in satisfactory standing, a student who fails two or more academic courses

within the first five academic course units or fewer may be required to withdraw if the Arts Examinations and Standings Committee considers that the student will not profit by further study.

Students can find their term grades in Quest and academic standing on their unofficial transcripts.

Bachelor of Accounting and Financial Management

To be in satisfactory standing in **Bachelor of Accounting and Financial Management (BAFM), Honours**, a student must maintain:

- a minimum cumulative average of 70% in the courses specified for the BAFM degree requirements, **and**
- a minimum cumulative overall average of 60%.

For further information, consult the School of Accounting and Finance website.

Bachelor of Arts

Year One Students

To be in satisfactory standing in **General Arts Year One**, a student must maintain:

- a minimum cumulative average of 65% in all Faculty of Arts courses, **and**
- a minimum cumulative overall average of 60%.

To be in satisfactory standing in **Honours Arts Year One**, a student must maintain:

- a minimum cumulative average of 70% in the potential major (end of 1B term), **and**
- a minimum cumulative overall average of 60%.

To be in satisfactory standing in **Honours Arts and Business**, a student must maintain:

- a minimum cumulative average of 70% in the potential major (end of 1B term), **and**
- a minimum cumulative average of 70% in the Arts and Business group of courses, **and**
- a minimum cumulative overall average of 60%.

Upper-Year Students

To be in satisfactory standing in a **general plan**, a student must maintain:

- a minimum cumulative average of 65% in all courses taken in the major, or a minimum cumulative average of 65% in all Arts courses in Liberal Studies, **and**
- a minimum cumulative overall average of 60%.

To be in satisfactory standing in an **honours plan**, a student must maintain:

- a minimum cumulative overall average of 60%, **and**
- a minimum cumulative average of 70% in all courses taken in the honours major, or a minimum cumulative average of 70% in all Arts courses in Liberal Studies, **or**
- a minimum cumulative average of 75% in all courses taken in the Honours Intensive Specialization major.

A student pursuing an honours double major must maintain a minimum cumulative average of 70% in all courses taken in each honours major. A student pursuing a joint honours major should consult the plan requirements and academic standing regulations listed for the appropriate faculty.

To be in satisfactory standing in **Honours Arts and Business (co-op and regular)**, a student must maintain (in addition to the honours plans requirement) a minimum cumulative average of 70% in the Arts and Business group of courses.

Bachelor of Computing and Financial Management

To be in good standing in **Bachelor of Computing and Financial Management (BCFM), Honours**, a student must maintain:

- a minimum cumulative average of 70% in the required courses from the Faculty of Arts and any free choice courses taken from the Faculty of Arts, **and**
- a minimum cumulative average of 60% in the required courses from the Faculty of Mathematics and any free choice courses taken from the Faculty of Mathematics, **and**
- a minimum cumulative overall average of 60%.

Failure to meet the minimum standing for the plan, more than two academic course units (four courses) of failed/excluded courses, or a difference of more than five academic course units (10 courses) between units attempted and units completed, may result in a Conditional standing, a Required to Withdraw - May Not Continue in Faculty standing, or a standing to proceed to an alternate plan for which the student qualifies.

Bachelor of Global Business and Digital Arts

To be in satisfactory standing in **Bachelor of Global Business and Digital Arts (BGBDA), Honours**, a student must maintain:

- a minimum cumulative average of 70% in the courses specified for the BGBDA degree requirements, **and**
- a minimum cumulative overall average of 60%.

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To be in satisfactory standing in **Bachelor of Sustainability and Financial Management (BSFM), Honours,** a student must maintain:

- a minimum cumulative average of 70% in the courses specified for the BSFM degree requirements, **and**
- a minimum cumulative overall average of 60%.

For further information, consult the School of Accounting and Finance website.

Non-Degree Program

To be in satisfactory standing, a non-degree student must maintain a minimum cumulative Faculty of Arts average of 65%.

In the following instances, a student can be registered as a non-degree student yet receive no academic standing decision:

- Students from other universities studying on a Letter of Permission basis.
- Students from other universities studying on an approved international exchange.
- Students who elect to proceed with studies despite having been assigned a Failed - Required to Withdraw standing decision in the previous term.

Post-Degree Program

Post-degree students must maintain a minimum cumulative overall average of 60%.

Foundation Term

The Foundation Term aims to assist students in continuing their studies at the University of Waterloo with more success. Refer to Arts specific Foundation Term information.

Students who receive a Failed academic standing at the end of their first or second term of study who apply for readmission may complete the Foundation Term after a minimum one-term absence.

Normally, students in 2A or above who receive their first Failed academic standing decision may apply for readmission to the University of Waterloo after an absence of two consecutive terms (eight months).

For more information, contact the Arts Undergraduate Office.

Readmission Following a Failed Academic Standing Decision

Required to Withdraw Decision in Arts

A student who has received a **Failed - Required to Withdraw** academic standing decision at the end of their first or second term of study should consult with their academic advisor. Normally, the student will first complete the Foundation Term or absent themselves for two terms. See The Centre website for information about the courses taken during a Foundation Term.

A student who has received a **Failed - Required to Withdraw** academic standing decision is eligible to apply for readmission after an absence of two terms (with the exception of first-year students who may be eligible for the Foundation Term).

To apply for readmission, a student must first complete an Application for Undergraduate Readmission within the specified deadlines.

Notes

1. Students contemplating readmission after receiving a Failed decision are strongly encouraged to consult the Arts Undergraduate Office prior to application.
2. Students contemplating readmission should take into consideration course selection dates when determining when to re-apply as course availability may be affected.

If a Student is Granted Readmission

- All previous University of Waterloo course attempts and grades will remain recorded on the student's transcript.
    - The student's cumulative overall and Arts (or major) averages will be **cleared**, that is, grades achieved in all previous course work will not count in cumulative averages.
    - Previous course work, where it is applied to degree requirements, is considered transfer credit and subject to transfer credit regulations.
- It is the student's responsibility to inform themselves of their transferred credits by meeting with an academic advisor, reading the transfer credit letter issued to them upon readmission, and viewing their unofficial transcript in Quest.

To fulfil degree requirements for graduation, students whose cumulative averages have been cleared must observe the following requirements:

- Cumulative and Arts (or major) averages for the degree will be based on courses taken following readmission and clearing.
- For a three-year degree, complete a minimum of 7.5 additional academic course units (15 courses).
- For a four-year degree, complete a minimum of 10 additional academic course units (20 courses).
- Complete at least half of the total number of University of Waterloo Arts courses required in the major.
    - For Three-Year General Liberal Studies, at least four academic course units (eight courses) must be University of Waterloo Arts courses.
    - For Four-Year General and Honours Liberal Studies, at least 6.5 academic course units (13 courses) must be University of Waterloo Arts courses.

Failed - May not Continue in Faculty Decision in Arts

In the event a student receives a **Failed - May not Continue in Faculty** academic standing in Arts, an application for readmission will normally not be considered until a period of at least five years has elapsed. Readmission is not guaranteed.

Workflow Information

Workflow Path	Faculty/AFIW Path(s) for Workflow

Committee approvals,

Faculty of Arts

UG-ARTS-Petitions - Arts: Petitions

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Change,

Rationale and Background

The Examinations and Standings Committee still encourages petitions to be submitted as close to the term in question as possible, within three years.

We are removing the statement about having to provide explanation as to why there would be a delay in their submission. This adjustment adheres to considerations of the Human Rights Code (protected grounds) and Accessibility for Ontarians with Disability Act (AODA) and makes the statements more succinct.

Approved at Arts Academic Regulations Committee on April 21, 2025.

General Regulation Information

Type of Regulation

Faculty

Faculty-specific,

Faculty of Arts

Regulation Page Name
Arts: Petitions

Description
Petition timelines

Regulation Details

Proposed

Regulation Details

Petitions must be made prior to the degree being conferred.

The Faculty of Arts Examinations and Standings Committee respects the confidentiality of all documentation submitted to it as it deliberates. Students should be aware, however, that claims made in a petition regarding another individual/body (e.g., claims regarding interaction between a student and an instructor) may require the Committee to verify such claims.

The Faculty of Arts Examinations and Standings Committee will review petitions submitted within three years of the end of the term in question. The chair of the Examinations and Standings Committee will determine if the Committee will consider a petition if the applicable term occurred more than three years in the past.

Existing

Regulation Details

Petitions must be made prior to the degree being conferred.

The Faculty of Arts Examinations and Standings Committee respects the confidentiality of all documentation submitted to it as it deliberates. Students should be aware, however, that claims made in a petition regarding another individual/body (e.g., claims regarding interaction between a student and an instructor) may require the Committee to verify such claims.
The Faculty of Arts Examinations and Standings Committee will review petitions submitted within three years of the end of the term in question. The Committee may review petitions if the applicable term occurred between three and five years in the past, but only if accompanied by an explanation as to the circumstances that resulted in the submission delay. The Chair of the Examinations and Standings Committee will determine if the Committee will consider a petition if the applicable term occurred more than five years in the past.

Workflow Information

Workflow Path	Faculty/AFIW Path(s) for Workflow
Committee approvals,	Faculty of Arts

[redacted]

UNIVERSITY OF WATERLOO

Date 2026/01/20

Show Empty Fields

Meeting Information

Agenda Page TitleSUC - 2026-02 - Regular Agenda - Faculty of Engineering

Career Level
Undergraduate,

Faculty/UnitEngineering

Date2026-02-04

Summary

Undergraduate Studies Submission for SUC Regular Agenda - January, 2025

Course Proposals

Courses: Retire No proposals have been added.

Courses: New No proposals have been added.

Courses: Changes No proposals have been added.

Programs & Plans Proposals

Programs & Plans Proposal Details

Major Modifications

Biomedical Imaging Technologies Specialization (NEW - BME)

Diploma in Business and Entrepreneurship (NEW)

Programs & Plans: Retire No proposals have been added.

Programs & Plans: Major Modifications

Code	Title	Type	Workflow Step
Biomedical Imaging Technologies Specialization	Biomedical Imaging Technologies Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee
Business and Entrepreneurship Diploma	Diploma in Business and Entrepreneurship	Programs	SUC Subcommittee, SUC Curricular Subcommittee

Programs & Plans: Minor Modifications No proposals have been added.

Regulations Proposals

Regulations Proposal Details

Retire

Engineering: Absences - Remove, following University Regulation and common advising practices.

Engineering: Bachelor of Architectural Studies Regulations - Remove, information not relevant or located elsewhere.

Engineering: Bachelor of Applied Science and Bachelor of Software Engineering Regulations - Remove, challenge for credit no longer being used.

Engineering: Joint Honours Plans - Remove, not specific to Engineering, information can be found on other faculty page.

Engineering: Second Degrees - Remove, not specific to Engineering, information can be found on Faculty of Arts page.

Regulations: Retire

Code	Title	Type	Workflow Step
UG-ENG-Absences	Engineering: Absences	Policies	SUC Subcommittee, SUC Curricular Subcommittee
UG-ENG-BAS Regulations	Engineering: Bachelor of Architectural Studies Regulations	Policies	SUC Subcommittee, SUC Curricular Subcommittee
UG-ENG-BASc & BSE Regulations	Engineering: Bachelor of Applied Science and Bachelor of Software Engineering Regulations	Policies	SUC Subcommittee, SUC Curricular Subcommittee
UG-ENG-Joint Honours Plans	Engineering: Joint Honours Plans	Policies	SUC Subcommittee, SUC Curricular Subcommittee

UG-ENG-Second Degrees	**Engineering: Second Degrees**	**Policies**	**SUC Subcommittee, SUC Curricular Subcommittee**

Regulations: New No proposals have been added.

Regulations: Changes No proposals have been added.

Biomedical Imaging Technologies Specialization - Biomedical Imaging Technologies Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-26

Quality Assurance Designation
Major Modification Qad

Major Modification Categories

Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for New Program/Plan

The Biomedical Imaging Technologies specialization was created to provide a suite of courses that align with the skills and knowledge necessary to work in this area of BME. Up until now, Imaging Technologies was lumped within medical devices specialization making it difficult to address the needs for required skills/knowledge for medical devices versus technologies used for diagnosis.

The specialization was designed by a subgroup of the BME undergraduate program committee with expertise in the area of the specialization.

Consultations (Departmental)

The specialization was approved by the BME undergraduate program committee and by the SYDE department.

General Program/Plan Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Faculty

Faculty of Engineering

Undergraduate Credential Type

Specialization

Program/Plan Name

Biomedical Imaging Technologies Specialization

Admissions

Specialization is available for students in the following majors

H-Biomedical Engineering

Admissions Entry Point
Declare Plan,

Requirements Information

Invalid Combinations
No,

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum average of 60.0% in the specialization courses.

Graduation Requirements

- Complete a total of seven courses according to the requirements below.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all of the following
- Complete all the following:
  - BME381 - Biomedical Engineering Ethics (0.50)
  - BME393 - Digital Systems (0.50)
  - BME544 - Biomedical Measurement and Signal Processing (0.50)
- Complete 1 of the following:
  - BME499 - Elective Biomedical Research Project (0.50)
  - BME581 - Ultrasound in Medicine and Biology (0.50)
  - BME582 - Biomedical Optics (0.50)
  - BME589 - Special Topics in Biomedical Devices (0.50)
  - BME599 - Special Topics in Biomedical Engineering (0.50)
- Complete 1 of the following:
  - Course Not Found
  - SYDE522 - Foundations of Artificial Intelligence (0.50)
- Complete 1 of the following:
  - ECE417 - Image Processing (0.50)
  - SYDE411 - Optimization and Numerical Methods (0.50)

    - SYDE572 - Introduction to Pattern Recognition (0.50)
    - SYDE575 - Image Processing (0.50)
    - SYDE577 - Deep Learning (0.50)
- Complete 1 course (at least 0.50 units) of BIOL or KIN at the 200-level or above

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. Topics studied in the research project or special project courses must be related to the Specialization and be approved by the Biomedical Engineering Program Director.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Business and Entrepreneurship Diploma - Diploma in Business and Entrepreneurship

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-04-15

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials

No,

Co-operative System of Study and Requirements

No,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

The Conrad School of Business, Entrepreneurship & Technology has two plans (Minor & Option), both of these are considered invalid combinations with the BE Diploma.

Change to Learning Outcomes

No,

Rationale and Background for New Program/Plan

Student Consultation Process

The development of this diploma emerged directly from student demand and engagement across the University of Waterloo community. The Conrad School has received numerous inquiries from post-graduates and current students seeking opportunities in accessing entrepreneurship and business education credentials.

These inquiries came from diverse sources, including alumni who wished to enhance their entrepreneurial skills after graduation and students and Directors from programs with limited elective capacity, such as those programs within Engineering and the Global Business and Digital Arts (GBDA) program.

While the Conrad School currently offers a Minor in Entrepreneurship (requiring 8 courses) and an Option in Entrepreneurship for Engineering students (requiring 6 courses), both programs are only available to current UW students and present significant course load challenges for students with limited elective capacity. The feedback we received indicated a strong need for a more accessible alternative that could serve a broader audience, including post-graduates and students who cannot accommodate the extensive course requirements of existing programs.

To systematically assess this interest, we conducted a comprehensive survey of 96 students representing multiple faculties across the university. The results demonstrated substantial demand: 20% expressed interest in a Diploma in Business and Entrepreneurship (4 courses), 19% indicated interest in a Certificate program (3 courses), and remarkably, 52% expressed willingness to pursue both credentials. When asked about career relevance, 88% of respondents rated the diploma as helpful to extremely helpful for their career development, with over 50% categorizing it as very helpful. While we were not able to survey non-UW students and post-graduates, the numerous inquiries we have received from these populations suggest there is significant interest beyond our current student body. This data provides compelling evidence of student demand and perceived value.

Program Review Process

The diploma underwent an internal review process within the Conrad School. On April 15, 2025, the idea of a Diploma or Certificate was reviewed by the Conrad Undergraduate Committee. Following this committee discussion, the decision was made to launch the student survey to validate the program concept and assess demand.

After the survey data was collected and analyzed, the complete program proposal, including the survey results demonstrating strong student interest, was presented to Conrad Council. This presentation included all Conrad faculty members except one, and all staff were present, ensuring comprehensive department review and input. The diploma proposal was welcomed by Conrad Council, indicating strong internal support for the program.

Strategic Alignment

The Diploma in Entrepreneurship and Business directly supports the University of Waterloo's strategic objectives by:

- **Enhancing academic excellence** - Strengthens Waterloo's reputation as a leader in entrepreneurship through flexible, cross-faculty accessibility

- **Preparing students for the modern economy** - Develops entrepreneurial skills increasingly valuable across all sectors and professions
- **Supporting Conrad's mission** - Advances the Conrad School's mandate as a campus-wide resource while extending reach to post-graduates and non-degree students
- **Promoting accessibility** - Removes barriers for students with limited elective capacity allowing them access to entrepreneurship education while earning a credential

This alignment ensures the Diploma contributes to broader university goals while addressing previously unmet student needs.

Implementation costs for the Diploma are minimal, with the Conrad School's existing administrative infrastructure capable of supporting the program. The School's Associate Director of Undergraduate and Non-Degree Programs, will oversee student inquiries and graduation approvals, leveraging existing marketing resources used for our Minor and Option. There will be additional costs related to marketing to non-UW students. Conrad will leverage our current marketing resources for our MBET program for this.

Consultations (Departmental)

The Associate Dean, Undergraduate studies consulted with the AVPA (Sept 15), Registrar (Sept 15), AVP Strategic Enrolment Management (Sept 9) and counterparts in the other faculty and AFIW (Sept 15) and no issues or concerns were raised. Admissions requirements and processes have been jointly developed with the admissions team in the Registrar's Office (see attachment).

Supporting Documentation

- Conrad BE Diploma logistics.docx

General Program/Plan Information

Faculty

Faculty of Engineering

Academic Unit

Conrad School of Entrepreneurship and Business

Faculty

Faculty of Engineering

Undergraduate Credential Type

Diploma

Program/Plan Name

Diploma in Business and Entrepreneurship

Online Degree/Diploma

This diploma is also available to study online (asynchronous)

Admissions

Admissions Entry Point
Both,

Declaration Audience
This credential is open to students enrolled in any degree program. This credential is open to students enrolled in any non- or post-degree academic plan.This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.

Requirements Information

Invalid Combinations
Yes,

List of Invalid Combinations

Entrepreneurship Minor

Entrepreneurship Option

Average Requirement
Yes,

Minimum Average(s) Required

- A minimum cumulative diploma average of 70.0%.

Graduation Requirements

- Complete a total of 2.0 units.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all of the following
- Complete all the following:
  - BET100 - Foundations of Entrepreneurial Practice (0.50)
  - BET320 - Entrepreneurial Strategy (0.50)
- Complete 2 additional BET courses

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

No,

Additional Constraints

1. Exceptions to the requirements listed above require prior approval from the Associate Director, Conrad School of Business.

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines
Yes,

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Engineering

Dependencies

UG-ENG-Absences - Engineering: Absences

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Retire,

Rationale and Background

This information is all captured in other areas of the UG calendar or on our website. Failure to Register & Voluntary Withdrawals should follow UW Absence from Studies regulation. Returning after an absence should follow Readmission process, and common advising practices. We no longer allow a student gone for 6 years to continue under the same requirement term.

Approved at FUGS on October 24.

General Regulation Information

Type of Regulation
Faculty-specific,

Faculty
Faculty of Engineering

Regulation Page Name
Engineering: Absences

Description
Types of absences: failure to register, voluntary withdrawals, request to complete degree after return from absence.

Regulation Details

Regulation Details

Students encounter situations that may interfere with their ability to complete a regularly scheduled term of study. In such cases, students may either not register for a given term or consider a voluntary withdrawal. If the absence exceeds one year, students should refer to the Request to Complete Degree Requirements Following an Absence below.

Failure to Register

Students who do not enrol in courses for the term in which they would normally be expected to return and who do not submit an Undergraduate Notice of Withdrawal Form or otherwise obtain the permission of the department, prior to the final registration date as defined in the Tuition and Other Fees section of this Calendar, will be deemed to have withdrawn from the Bachelor of Architectural Studies (BAS), Bachelor of Applied Science (BASc), or Bachelor of Software Engineering (BSE) program. Permission to return to classes is considered according to the following rule: If the absence has not exceeded one year and the student has an acceptable standing (Excellent, Good, Satisfactory), then that student is permitted to return to study at a time appropriate to their plan. If students have a negative standing decision (such as Required to Repeat), then the date of return is subject to the constraints associated with that standing.

Voluntary Withdrawals

Students may withdraw from a term or from their plan depending on the time of the term and depending on any extenuating circumstances. In all cases, students must submit an Undergraduate Notice of Withdrawal Form. The following describes the criteria and constraints for each of these alternatives.

- Students may withdraw from the (entire) term, without academic penalty, at any time prior to the start of the Drop with WD Period. Students must notify their academic advisor and complete the appropriate forms.
- The courses taken by students who withdraw from a term during the Drop with WD Period remain on the transcript and are recorded as WD (Withdrew after the drop deadline). The term decision is recorded as Not Applicable. Students may request to return to their studies one year after the start of the term withdrawn from.
- The courses taken by students who withdraw from a term during the Drop with WF Period remain on the transcript and are recorded as WF (Withdrew Failure). The term decision is Required to Withdraw. Students may apply for readmission one year after the start of the term withdrawn from.

Students who voluntarily withdraw from a term are expected to return to their plan of study within one year from the beginning of the term from which they

withdrew. After this period, if students have not enrolled in their plan, they will be deemed to have withdrawn from the Bachelor of Architectural Studies (BAS), Bachelor of Applied Science (BASc), or Bachelor of Software Engineering (BSE).

Students who withdraw from their degree (BAS, BASc, or BSE), or are deemed to have done so, will be required to apply for readmission in order to be considered for continuation of their plan of study.

See the Important Dates & Deadlines and the Tuition and Other Fees section of this Calendar with respect to eligibility for refund of fees paid for the term.

For students in the 1A term, additional leniency may be permitted depending on the circumstances leading to the decision to withdraw.

Request to Complete Degree Requirements Following an Absence

The requirements and expectations for students wishing to return to their degree after a period away are described below. These requirements are for students who left their degree in good standing. Good standing refers to situations where students were permitted to return to their degree during their last academic term. It specifically does not include students that are required to withdraw from engineering. **Note**: These requirements apply to all previously enrolled students in the Faculty of Engineering.

1. If students have not registered in classes for a period of less than one year, the promotion rules associated with that degree describe the return requirements (see Voluntary Withdrawals above).
2. If students have been away from study in their plan for a period of one year or more, their return is to be governed by the following alternatives:
    - Students who have been away for a period of less than six years can apply to complete the degree requirements that were in place at the time they left their degree. However, as plans evolve some courses may have changed and there may be a need to modify the exact sequence of the material but not to increase the normal load required to complete the degree. (It may be to a student's advantage to repeat some material prior to starting new material.)
    - Students who have been away for a period of six years or more and were no more than 1.5 units (weight) from completing their original degree requirements can apply to complete the degree requirements that were in place at the time they left their degree. Due to the evolution of our plans, there may be a need to modify exactly which courses are required to complete the degree.
    - Students who have been away for a period of six years or more and have more than 1.5 units (weight) to complete their degree are required to complete the degree requirements in effect at the time of their readmission.

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

UG-ENG-BAS Regulations - Engineering: Bachelor of Architectural Studies Regulations

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Retire,

Rationale and Background

Final Exam information is out of date, LOP information is on Courses & Classes page, Transfer Credit information is related to Admissions.

Approved at FUGS on October 24.

General Regulation Information

Type of Regulation
Faculty-specific,

Faculty
Faculty of Engineering

Regulation Page Name
Engineering: Bachelor of Architectural Studies Regulations

Description
Final exams. Letter of Permission (Lof P). Transfer credit.

Regulation Details

Regulation Details

Final Examinations

1. Failure to write an examination is ordinarily considered a failure to pass (a grade of 32). A student who defaults a final examination, except for a properly certified reason, shall have no make-up examination privileges and may be required to repeat the work in class. If a student fails to write for medical reasons, a doctor's certificate covering the precise period of absence

must be filed in the Office of the Registrar within one week of the set examination date.

2. A student will be eligible for deferred examinations only when failure to pass is attributable to extraordinary circumstances. In addition, students:
    - must have attended a reasonable number of lectures in the course in which they propose to write, and must have satisfied all course work requirements;
    - must have secured the permission of the professor concerned.

Letter of Permission

Students may request to take a course(s) at other universities for credit towards a University of Waterloo degree by Letter of Permission. A Letter of Permission is granted only to students who have successfully completed a minimum of four University of Waterloo courses and who are in good standing; that is, they have satisfied the minimum cumulative average requirements for their current program. A maximum total of three courses may be taken on a Letter of Permission or by Cross-Registration with Wilfrid Laurier University or by enrolling in a Laurier course that appears on the University of Waterloo Schedule of Classes.

Courses taken on a Letter of Permission must be approved in advance by the Associate Director, Undergraduate Studies and recorded by the Office of the Registrar. Such courses must be taken at a degree granting university. Credit for courses taken on a Letter of Permission will be granted only when the assigned grade is equivalent to at least 60% on the University of Waterloo grade scale.

Normally, courses considered by the Faculty of Engineering to be core or degree term requirements may not be taken on a Letter of Permission.

Wherever possible, courses taken on a Letter of Permission will be recorded as the equivalent University of Waterloo course and graded as per policy for the Faculty of Engineering.

Transfer Credit

Transfer credit may be given for courses in which a grade of 70% or better was obtained. Such courses must have been taken at a degree granting university. Application must be made to the Associate Director, Undergraduate Studies where transfer credits are desired as an exemption from required core courses.

As the Bachelor of Architectural Studies, Honours Architecture academic program is included in the accreditation review of the professional Master of Architecture program by the Canadian Architectural Certification Board, absolute equivalency of courses for transfer credit must be determined. It is the student's responsibility to submit transcripts and full course outlines for assessment.

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Engineering

UG-ENG-BASc & BSE Regulations - Engineering: Bachelor of Applied Science and Bachelor of Software Engineering Regulations

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2023

Proposal Details

Proposal Type
Retire,

Rationale and Background

This practice is no longer used in the Faculty of Engineering. Course substitutions and exemptions are more appropriate.

Approved at FUGS on October 24.

General Regulation Information

Type of Regulation
Faculty-specific,

Faculty
Faculty of Engineering

Regulation Page Name
Engineering: Bachelor of Applied Science and Bachelor of Software Engineering Regulations

Description
Challenge for credit.

Regulation Details

Regulation Details

Challenge for Credit

In unusual circumstances, a student may have received formal training, typically from an institution similar to the University of Waterloo, in material that they would normally be required to take as a course in their plan. In such cases, they

may show evidence as to why they should be excused from taking the course. If the evidence is acceptable to the student's department, the student may be permitted to demonstrate competence in the material in a manner acceptable to the department offering the course. This process is known as Challenge for Credit. A Challenge for Credit cannot be used to recover from a failed course. Additional information may be obtained from the student's department. Where a Challenge for Credit is successful, the student is still expected to carry a full course load for the corresponding term; Challenge for Credit cannot be used to reduce the course load from the normal course load for any term. Challenge for Credit is available only for courses taught by the Faculty of Engineering.

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

UG-ENG-Joint Honours Plans - Engineering: Joint Honours Plans

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2023

Proposal Details

Proposal Type
Retire,

Rationale and Background

The information is not about how other students can pursue Engineering joint honours, if students want to pursue a joint honours they should be looking on the other faculty pages. Very few students pursue joint honours, so we do not feel promoting through the calendar is necessary.

Approved at FUGS on October 24.

General Regulation Information

Type of Regulation
Faculty-specific,

Faculty
Faculty of Engineering

Regulation Page Name
Engineering: Joint Honours Plans

Description
No joint honours plans in Engineering, but Engineering students can do joints in other faculties.

Regulation Details

Regulation Details

Engineering does not offer joint honours academic plans to non-engineering students. However, Bachelor of Architectural Studies (BAS), Bachelor of Applied Science (BASc), and Bachelor of Software Engineering (BSE) students may undertake a joint honours academic plan with non-engineering academic units.

A joint honours academic plan requires meeting all requirements of both plans. Students who choose a joint honours academic plan may require extra courses. However, courses required by the other plan can often be used to satisfy some of the requirements of the technical electives or complementary studies course groups in the BASc or BSE program.

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

UG-ENG-Second Degrees - Engineering: Second Degrees

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2023

Proposal Details

Proposal Type
Retire,

Rationale and Background

The information is not about how other students can pursue Engineering degrees, the advice for students is captured on the Arts: Second Degrees page. Very few students pursue second degrees, so we do not feel promoting through the calendar is necessary.

Approved at FUGS on October 24.

General Regulation Information

Type of Regulation
Faculty-specific,

Faculty
Faculty of Engineering

Regulation Page Name
Engineering: Second Degrees

Description
Concurrent degrees

Regulation Details

Regulation Details

Students may take advantage of other opportunities including a concurrent Bachelor of Arts (BA) degree. A concurrent BA degree will require extra courses as well as agreement by both faculties of Arts and Engineering; interested students should consult their undergraduate academic advisor.

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

UNIVERSITY OF WATERLOO

Date 2026/01/27

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Meeting Information

Agenda Page TitleSUC - 2026-02 - Regular Agenda (ENVE 417/418) - Faculty of Engineering

Career Level
Undergraduate,

Faculty/UnitEngineering

Date2026-02-04

Summary

Undergraduate Studies Submission for SUC - January, 2026 - ENVE 417/ENVE 418

Course Proposals

Course Proposal Details

New Courses:

ENVE 417 - Climate Change, Water Security, and Adaptation

ENVE 418 - Ecohydrological Modelling of Nature-Based Solutions to Address Climate and Water Challenges

Courses: Retire No proposals have been added.

Courses: New

Code	Title	Type	Workflow Step
ENVE 417	Climate Change, Water Security, and Adaptation	Courses	SUC Subcommittee, SUC Curricular Subcommittee
ENVE 418	Ecohydrological Modelling of Nature-Based Solutions to Address Climate and Water Challenges	Courses	SUC Subcommittee, SUC Curricular Subcommittee

Courses: Changes No proposals have been added.

Programs & Plans Proposals

Programs & Plans: Retire No proposals have been added.

Programs & Plans: Major Modifications No proposals have been added.

Programs & Plans: Minor Modifications No proposals have been added.

Regulations Proposals

Regulations: Retire No proposals have been added.

Regulations: New No proposals have been added.

Regulations: Changes No proposals have been added.

ENVE 417 - Climate Change, Water Security, and Adaptation

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Rationale for New Course

Course has been offered as a special topics course in undergraduate and graduate program. Enrollment has been good, and has attracted students from outside the department.

Offering as a course with its own unique numbers will allow us to better advertise, place on Technical Elective lists, and add to our specializations.

Consultations

No overlap with Applied Math courses confirmed by Hans De Sterck, chair of Applied Math, 12 November 2025 (through Math ADUG).

Supporting Documentation

- Winter 2025_ Climate Change, Water Security & Adaptation.pdf

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Civil and Environmental Engineering

Subject Code

ENVE

Number

417

Course Level

400

Title
Climate Change, Water Security, and Adaptation

Abbreviated Title
Climate, Water Sec, Adaptation

Undergraduate Communication Requirement Identifier
No,

Description
Climate change is one of the most profound obstacles to universal well-being that society faces. This course introduces the basics of climate change, especially hydroclimate, and its effects on water security. It then explores how water values and trade-offs that can impede water security advancement can be integrated with grey and green technologies to accelerate climate change adaptation and advance all 17 Sustainable Development Goals. The course culminates in a project on water security and climate resilience.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
Lecture

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Cross-Listing Information

Is this course cross-listed?
No,

Repeatable Courses

Can this course be repeated for credit?
No,

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
No consent required,

Prerequisites

Students must be in level 3A or higher

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in: ENVE497 (Topic 6: Climate Change, Water Security and Adaptation)

Course Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Engineering

Dependencies

There are no dependencies

ENVE 418 - Ecohydrological Modelling of Nature-Based Solutions to Address Climate and Water Challenges

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Rationale for New Course

This course is currently offered as a special topics course. Enrollment has been good in past offerings, attracting students from inside and outside the department. Adding a unique course code will allow us to advertise and add to TE lists and specializations.

Supporting Documentation

- Ecohydrology Course Outline 2024 2024-09-10 13_05_22.pdf

Course Information

Faculty
Faculty of Engineering

Academic Unit
Department of Civil and Environmental Engineering

Subject Code
ENVE

Number
418

Course Level

400

Title

Ecohydrological Modelling of Nature-Based Solutions to Address Climate and Water Challenges

Abbreviated Title

Ecohydrological Modelling

Undergraduate Communication Requirement Identifier

No,

Description

This course introduces the principles and applications of ecohydrological models, focusing on designing nature-based solutions for climate and water challenges. Nature-based solutions—such as wetlands, green infrastructure, and sustainable farming practices—address societal issues by protecting, managing, and restoring natural and modified ecosystems, benefiting both people and nature. The course covers the integration of ecological and hydrological processes to model nature-based solutions in human-dominated landscapes. Students will gain proficiency in the fundamental principles of modelling watershed hydrology and biogeochemistry, and learn to design and apply models that simulate interactions between water, vegetation, and climate. Model development will be supported by an extensive review of relevant literature and philosophical discussions on optimal model complexities for societal needs.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?
No,

Repeatable Courses

Can this course be repeated for credit?
No,

Enrolment Rules

Consent to Add
Instructor consent required,

Consent to Drop
No consent required,

Prerequisites

Students must be in level 3A or higher

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in: CIVE497 (Topic 28: Ecohydrological Modeling)

Course Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

UNIVERSITY OF WATERLOO

Date 2026/01/20

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Meeting Information

Agenda Page TitleSUC - 2026-02 - Regular Agenda - (SYDE) - Faculty of Engineering

Career Level
Undergraduate,

Faculty/UnitEngineering

Date2026-02-04 **Time** **Location**

Summary

Undergraduate Studies Submission for SUC (Systems Design Engineering) Regular Agenda - January, 2026

Other Business

Attachment(s)

Course Proposals

Course Proposal Details
1. Course Changes

Course Retire:
SYDE 111 - Retire course
SYDE 112 - Retire course
SYDE 113 - Retire course
SYDE 114 - Retire course
SYDE 192 - Retire course

New Courses:
SYDE 151 - Introduction to Systems Thinking
SYDE 152 - Introduction to Ecological Systems
SYDE 163 - Introduction to Design 2
SYDE 208 - Discrete Mathematics and Logic
SYDE 251 - Introduction to Socio-ecological Systems
SYDE 264 - Needs Analysis and Prototyping
SYDE 321 - Introduction to Responsible Artificial Intelligence Systems
SYDE 364 - Design Consultation
SYDE 382 - Multi-physics Modelling and Simulation
SYDE 385 - Material Properties
SYDE 400 - Work-term Symposium Presentation

Course Changes

SYDE 161 - Updating course description

SYDE 212 - Updated course title and description

SYDE 261 - Updating course title
SYDE 262 - Updating course title and description

SYDE 288 - Renumbering from 182

SYDE 362 - Updating course title

SYDE 461 - Updating components

SYDE 462 - Updating components

SYDE 522 - Cross-listing with BME 522

SYDE 534 - Cross-listing with ENVS 434.

Courses: Retire

Code	Title	Type	Workflow Step

SYDE 111	Calculus 1	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 112	Calculus 2	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 113	Elementary Engineering Mathematics	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 114	Matrices and Linear Systems	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 192	Digital Systems	Courses	SUC Subcommittee, SUC Curricular Subcommittee

Courses: New

Code	Title	Type	Workflow Step
SYDE 151	Introduction to Systems Thinking	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 152	Introduction to Ecological Systems	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 163	Introduction to Design 2	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 208	Discrete Mathematics and Logic	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 251	Introduction to Socio-Ecological Systems	Courses	SUC Subcommittee, SUC Curricular Subcommittee

SYDE 264	Needs Analysis and Prototyping	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 321	Introduction to Responsible Artificial Intelligence Systems	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 364	Design Consultation	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 382	Multi-Physics Modelling and Simulation	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 385	Material Properties	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 400	Work-Term Symposium Presentation	Courses	SUC Subcommittee, SUC Curricular Subcommittee

Courses: Changes

Code	Title	Type	Workflow Step
SYDE 161	Introduction to Design	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 212	Probability, Statistics, and Data Science	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 261	Culture of Design, Impacts	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 262	Engineering Economics and Sustainability	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 288	Physics 2: Dynamics	Courses	SUC Subcommittee, SUC Curricular Subcommittee

SYDE 362	Design Testing, Validation, and Verification	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 461	Systems Design Engineering Capstone Project 1	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 462	Systems Design Engineering Capstone Project 2	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 522	Foundations of Artificial Intelligence	Courses	SUC Subcommittee, SUC Curricular Subcommittee
SYDE 534	Electric Energy Systems	Courses	SUC Subcommittee, SUC Curricular Subcommittee

Programs & Plans Proposals

Programs & Plans Proposal Details

Minor Modifications:

H - Systems Design Engineering - changes to required courses and PD requirements. Replacing SYDE math courses to MATH. Removal of CEAB planner

Programs & Plans: Retire No proposals have been added.

Programs & Plans: Major Modifications No proposals have been added.

Programs & Plans: Minor Modifications

Code	Title	Type	Workflow Step
H-Systems Design Engineering	Systems Design Engineering (Bachelor of Applied Science - Honours)	Programs	SUC Subcommittee, SUC Curricular Subcommittee

Regulations Proposals

Regulations Proposal Details

Regulations: Retire No proposals have been added.

Regulations: New No proposals have been added.

Regulations: Changes No proposals have been added.

SYDE 111 - Calculus 1

Top

Effective Date & Career

Career
Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year

Fall 2024

Offering Number

1

Proposal Details

Proposal Type

Retire,

Academic Unit Approval

2025-02-10

Last Offering of Course

Fall 2025

Retired Impact

Yes,

Retired Impact Details

All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Consultations

Approved by Math ADUG Benoit Charbonneau – June 2025

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

111

Course Level

100

Title

Calculus 1

Abbreviated Title

Calculus 1

Undergraduate Communication Requirement Identifier

No,

Description

Differential calculus: limits, continuity, derivatives, differentials, applications. Sequences and series: convergence, power series, Taylor expansions. Simple numerical methods. Introduction to integration, indefinite and definite integral, techniques of integration.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1A
- Enrolled in H-Biomedical Engineering, or H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- MATH116 - Calculus 1 for Engineering (0.50)
- MATH117 - Calculus 1 for Engineering (0.50)
- MATH127 - Calculus 1 for the Sciences (0.50)
- MATH137 - Calculus 1 for Honours Mathematics (0.50)
- MATH147 - Calculus 1 (Advanced Level) (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Prerequisites

- PHYS 396 - Biophysics of Imaging View Program

Required Courses (Term by Term)

- H-Biomedical Engineering - Biomedical Engineering (Bachelor of Applied Science - Honours) View Program
- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 112 - Calculus 2

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Retire,

Academic Unit Approval
2025-02-10

Last Offering of Course
Spring 2026

Retired Impact
Yes,

Retired Impact Details
All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Consultations

Approved by Math ADUG Benoit Charbonneau – June 2025

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

112

Course Level

100

Title

Calculus 2

Abbreviated Title

Calculus 2

Undergraduate Communication Requirement Identifier

No,

Description

Integration: improper integrals and applications. Multi-variable calculus: partial, total, and directional derivative, gradient divergence, double and triple integrals, Jacobian, solution techniques, applications.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1B
- Enrolled in H-Biomedical Engineering, or H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- MATH118 - Calculus 2 for Engineering (0.50)
- MATH119 - Calculus 2 for Engineering (0.50)
- MATH128 - Calculus 2 for the Sciences (0.50)
- MATH138 - Calculus 2 for Honours Mathematics (0.50)
- MATH148 - Calculus 2 (Advanced Level) (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Prerequisites

- MATH 218 - Differential Equations for Engineers View Program
- AMATH 382 - Computational Modelling of Cellular Systems
- BIOL 382 - Computational Modelling of Cellular Systems View Program
- PHYS 396 - Biophysics of Imaging View Program

Required Courses (Term by Term)

- H-Biomedical Engineering - Biomedical Engineering (Bachelor of Applied Science - Honours) View Program
- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 113 - Elementary Engineering Mathematics

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Retire,

Academic Unit Approval
2025-02-10

Last Offering of Course
Fall 2025

Retired Impact
Yes,

Retired Impact Details
All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Consultations

Approved by Math ADUG Benoit Charbonneau – June 2025

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

113

Course Level

100

Title

Elementary Engineering Mathematics

Abbreviated Title
Elementary Engineering Math

Undergraduate Communication Requirement Identifier
No,

Description
Functions: trigonometric, exponential, log, inverse functions. Mathematical notation and proof techniques. Metric spaces. Geometry and algebra: root-finding, vectors, coordinate systems, lines and planes, conic sections, complex numbers. Introduction to numerical computation: binary and floating point numbers and arithmetic, accuracy and sources of error.

Units
0.25

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1A
- Enrolled in H-Biomedical Engineering, or H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Required Courses (Term by Term)

- H-Biomedical Engineering - Biomedical Engineering (Bachelor of Applied Science - Honours) View Program
- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 114 - Matrices and Linear Systems

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Retire,

Academic Unit Approval
2025-02-10

Last Offering of Course
Spring 2026

Retired Impact
Yes,

Retired Impact Details
All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

All SYDE math courses are being replaced in the SYDE and BME programs and replaced with MATH math courses to align with the other departments in FOE.

Consultations

Approved by Math ADUG Benoit Charbonneau – June 2025

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

114

Course Level

100

Title

Matrices and Linear Systems

Abbreviated Title
Matrices & Linear Systems

Undergraduate Communication Requirement Identifier
No,

Description
Matrix algebra, inverses, solution of linear systems, determinants, eigenvalues and eigenvectors, lower-upper (LU) factorization. Numerical methods: sensitivity, condition number.

Units
0.25

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1B
- Enrolled in H-Biomedical Engineering, or H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Antirequisites

- NE 112 - Linear Algebra for Nanotechnology Engineers View Program

Prerequisites

- AMATH 391 - Data Analysis with Fourier and Wavelet Methods View Program

Required Courses (Term by Term)

- H-Biomedical Engineering - Biomedical Engineering (Bachelor of Applied Science - Honours) View Program
- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 192 - Digital Systems

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Retire,

Academic Unit Approval
2025-02-10

Last Offering of Course
Spring 2026

Retired Impact
Yes,

Retired Impact Details
Students should all have completed this course by the retire date. If course needs to be repeated, alternative plan can be made.

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

This course is being replaced with SYDE 208 discrete math in 2A.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

192

Course Level

100

Title

Digital Systems

Abbreviated Title

Digital Systems

Undergraduate Communication Requirement Identifier

No,

Description

Digital technology, combinatorial logic, binary arithmetic, synchronous sequential circuits, design methodology, algorithmic state machines, microcomputer interfacing.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LectureTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?

No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1B
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in: BME292, BME293

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Prerequisites

- ECE 327 - Digital Hardware Systems View Program

Antirequisites

- BME 393 - Digital Systems View Program
- CS 251E - Computer Organization and Design (Enriched)
- CS 251 - Computer Organization and Design View Program

View Program

Prerequisites

- ECE 222 - Digital Computers View Program
- ECE 224 - Embedded Microprocessor Systems View Program

Antirequisites

- CS 230 - Introduction to Computers and Computer Systems

Course Lists View Program

- Computing Option - Computing Option View Program
- Computer Engineering Option - Computer Engineering Option
- Software Engineering Option - Software Engineering Option View Program
  View Program

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 151 - Introduction to Systems Thinking

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: In the new curriculum, we have also introduced a systems spine of courses. This course introduces students to systems thinking.

Rationale for Change

Consultations

Supporting Documentation

- syde151.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

151

Course Level

100

Title
Introduction to Systems Thinking

Abbreviated Title
Intro Systems Thinking

Undergraduate Communication Requirement Identifier
No,

Description
Engineers frequently bring people and technology together to address complex situations in an equitable way that benefits people and the environment. The course objective is to provide the students with a conceptual toolset to bridge disciplinary modes of thinking and elicit critical thinking. It introduces systems thinking to critically contemplate components, interactions, assumptions, and modes of engagement. The course will emphasize critical thinking about how the concepts and methods are applicable.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureWorkshop

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1A or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 152 - Introduction to Ecological Systems

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

SYDE 152 provides the necessary chemistry and biology to analyze ecological systems. Socio-environmental systems are a cornerstone of the syde program and ecological systems are really environmental systems.

Rationale for Change

Consultations

Supporting Documentation

- syde 152.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

152

Course Level

100

Title

Introduction to Ecological Systems

Abbreviated Title

Intro Ecological Systems

Undergraduate Communication Requirement Identifier

No,

Description

Climate change, habitat loss, pollution, and invasive species are transforming our planet at an unprecedented pace. To foster a sustainable future, engineers must understand how ecosystems work - how living things interact with each other and with their environment, and how these interactions shape the world around us. This course introduces the fundamentals of chemistry and biology for ecology through the lens of engineering systems thinking. The course explores ecology topics such as species adaptations, population dynamics, community interactions, and the structure and function of terrestrial and aquatic ecosystems. The course makes connections between macro ecological and micro bio-chemical views. By the end of the course, students will be equipped with the ecological and microbiological foundations needed to tackle some of today's most pressing environmental challenges.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
Lecture

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1B or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 163 - Introduction to Design 2

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: This course is a continuation of syde161, providing the students with a spine of design courses with one every term. Currently, the human factors course was in its place however that focus is more on human factors and not design. It is important that the important concepts of design be spread out over 2 semesters in 1A and 1B.

Rationale for Change

Consultations

Supporting Documentation

- syde 163.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

163

Course Level

100

Title

Introduction to Design 2

Abbreviated Title

Intro Design 2

Undergraduate Communication Requirement Identifier

No,

Description

In this course, students will continue to learn about engineering design processes, engineering professionalism, and project management, while participating in a team-based design project. Student teams will apply an iterative, human-centered design process and systems perspective to understand, represent, and identify possible targets for design interventions, develop appropriate design specifications, ideate and prototype possible solutions, and evaluate solutions through verification and validation. The emphasis is on ideation, prototyping, and testing building upon the introductory content and needs assessment and synthesis from SYDE 161.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureWorkshop

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1B or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Engineering

Dependencies

There are no dependencies

SYDE 208 - Discrete Mathematics and Logic

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: The course replaces syde192. Syde192 was found to be not beneficial to the students as the material did not add value to their education. This course provides a solid mathematical basis for digital circuits, but also includes set theory and other fundamental elements of math that are useful for digital circuitry and computing.

Rationale for Change

Consultations

Supporting Documentation

- syde 208.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code
SYDE

Number
208

Course Level
200

Title
Discrete Mathematics and Logic

Abbreviated Title
Discrete Mathematics and Logic

Undergraduate Communication Requirement Identifier
No,

Description
This course blends and balances mathematical reasoning, combinatorial analysis, discrete structures, algorithmic thinking, applications, and modelling. Topics covered include propositional and predicate logic, mathematical notation and proof techniques, induction and recursion, sets, relations, and functions, syntax vs. semantics, introduction to elementary number theory, combinatorics, graphs and directed graphs, and algebraic structures. Applications of discrete formal structures for Systems Design Engineering are also analyzed.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading

Special Course Grading

Yes,

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 2A or higher

- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- ECE108 - Discrete Mathematics and Logic 1 (0.50)
- SYDE192 - Digital Systems (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 251 - Introduction to Socio-Ecological Systems

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: The course is a core course to introduce students to sociology environmental systems, which is a core area of systems design engineering. This course builds on the basics of ecological systems in the new course SYDE 152, introducing the sociological element.

Rationale for Change

Consultations

Supporting Documentation

- syde 251.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

251

Course Level

200

Title

Introduction to Socio-Ecological Systems

Abbreviated Title
Intro Socio-Eco Systems

Undergraduate Communication Requirement Identifier
No,

Description
Everything that ensures the sustainability and quality of life on this planet is connected within integrated socio-ecological systems. If we only treat issues within these systems as isolated events, we contribute to widespread structural injustice in the world. The social component refers to all human activities - built environment, technology, politics, and culture. On the other hand, the ecological component refers to the biosphere. To understand how these systems function we must consider their interactions in spatial and temporal scales. The course introduces the foundation concepts in complex socio-ecological problems and employs systems thinking to explore human-environment interactions at various scales.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Must have completed the following:
  - Course Not Found
- Students must be in level 2B or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 264 - Needs Analysis and Prototyping

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: The course is part of the design spline of courses in systems design engineering. Previously, the material was spread over a couple of design courses however the topic warrants its own course.

Rationale for Change

Consultations

Supporting Documentation

- syde 264.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

264

Course Level

200

Title

Needs Analysis and Prototyping

Abbreviated Title

Needs Analysis & Prototyping

Undergraduate Communication Requirement Identifier

No,

Description
The methodology of design, situation of concern; needs analysis and problem definition, engineering analysis and generation of alternative solutions, design prototyping, and design documentation. The lecture material is supplemented by a term-long design project done in small groups that develops hands-on experience with electromechanical prototyping.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
Lecture

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 2B or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 321 - Introduction to Responsible Artificial Intelligence Systems

Top

Effective Date & Career

Career

Effective Term and Year

Undergraduate,

Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: The course builds upon the data science material in syde 212 (probability, statistics and data science). With the prominence of AI in today's society, it is imperative that students be introduced to the basics of AI deep learning and its pros and cons for implementations in various industries and applications. The course differentiates itself from other offerings from other departments in its emphasis on responsible development and deployment of AI systems, including their limitations, risk minimization and management, ethical considerations, reliability, robustness, scalability and sustainability.

Rationale for Change

Consultations

Supporting Documentation

- syde 321.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

321

Course Level

300

Title

Introduction to Responsible Artificial Intelligence Systems

Abbreviated Title

Intro Responsible AI

Undergraduate Communication Requirement Identifier

No,

Description

The objective of this course is to introduce students to fundamental concepts of artificial intelligence. An overview of different learning schemes will be provided, including supervised and unsupervised algorithms. The course will review some data science methods (dimensionality reduction, clustering, classification, Markov decision processes). The focus will be on the development of deep and shallow neural networks and their application in solving engineering problems, which also includes data curation and training procedures. The context of the course will be on the responsible development and deployment of AI systems,

including their limitations, risk minimization and management, ethical considerations, reliability, robustness, scalability, and sustainability.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureLaboratory

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?

Total Completions Allowed

No,

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Must have completed the following:
  - SYDE212 - Probability and Statistics (0.50)
- Students must be in level 3A or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- CS480 - Introduction to Machine Learning (0.50)
- SYDE577 - Deep Learning (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Engineering

Dependencies

There are no dependencies

SYDE 364 - Design Consultation

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: The course prepares the students for the capstone courses in 4th year by focusing on consultations with stakeholders.

Rationale for Change

Consultations

Supporting Documentation

- syde 364.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

364

Course Level

300

Title

Design Consultation

Abbreviated Title

Design Consultation

Undergraduate Communication Requirement Identifier

No,

Description

In this course, students will engage with stakeholders, colleagues, communities, and the natural world as they apply human-centered and participatory design practices to fully understand a complex design problem in its broader societal and environmental context. Students will develop and represent a deep understanding of the design problem while acknowledging their own knowledge gaps, deficiencies in existing solutions, and uncertainties. Students will work with each other and stakeholders to determine viable solution approaches while considering a wide range of options including new or changes to existing products, processes, infrastructure, policy, or other systems.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components
LectureWorkshop

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 3B or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 382 - Multi-Physics Modelling and Simulation

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: Previously our students took electricity and magnetism (EM), fluids and thermodynamics, which we are removing from the curriculum. The essence of all of these courses are differential equations that model physical phenomena. Our students currently get the fundamentals of EM in syde192L however the fundamentals in fluids and thermo are best addressed by differential equations. What we would like to teach our students are some of the fundamentals so they understand what to expect in the output which is the solution to the differential equation, how to set up the differential equation and how to validate them.

Rationale for Change

Consultations

Supporting Documentation

- syde382.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

382

Course Level
300

Title
Multi-Physics Modelling and Simulation

Abbreviated Title
Multi-Physics Modelling

Undergraduate Communication Requirement Identifier
No,

Description
Introduction to describing physical phenomena in differential form such as fluid flow (Navier-Stokes), thermodynamics (energy conservation, enthalpy, entropy), electro-magnetics (Maxwell equations), mechanics, and dynamics. Topics include finite difference methods, finite element methods, boundary conditions, and iterative solvers. The objective is to model with differential equations, predict what the result characteristics, solve models with FEM computational algorithms, and authenticate the results.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
Lecture

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Must have completed the following:
  - MATH218 - Differential Equations for Engineers (0.50)
  - SYDE351 - Systems Models 1 (0.50)
- Students must be in level 3B or higher

- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 385 - Material Properties

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale: The course replaces two courses currently in the curriculum, that being Material chemistry and deformable solids. Rather than have the emphasis

on the chemistry, the emphasis is on material properties including their static deformable properties.

Rationale for Change

Consultations

Supporting Documentation

- syde385.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

385

Course Level

300

Title

Material Properties

Abbreviated Title
Material Properties

Undergraduate Communication Requirement Identifier
No,

Description
An introduction to the properties, processing and structure of metals, semiconductors, polymers, ceramic, nano materials, and biomaterials. Introduction to mechanical response of materials and stress-strain relationships. Behaviour of prismatic members in tension, compression, shear, bending, and torsion. Shear-force and bending-moment diagrams and an introduction to instability.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureLaboratory

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 3A or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 400 - Work-Term Symposium Presentation

Top

Effective Date & Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Offering Number

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Moving symposium poster presentation from 3B to 4A. Changed description to align with BME offering. Also, changed the wording slightly to accommodate various types of presentations the students may conduct.

Rationale for Change

Consultations

Supporting Documentation

- SYDE 400.docx

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

400

Course Level

400

Title

Work-Term Symposium Presentation

Abbreviated Title

Symposium Presentation

Undergraduate Communication Requirement Identifier

No,

Description

A work-term presentation is composed and presented at the Work-term symposium. The presentation provides an opportunity for students to effectively communicate and reflect on their engineering experience gained during their co-op work terms. In the presentation, students draw connections between the theoretical aspects of engineering taught in the classroom and the practical applications of that theory in the workplace.

Units

0.13

Exceptions to Fees or Academic Progress Units

No,

Components

Primary Component

ProjectSeminar	Project

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add

Consent to Drop

No consent required,

Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 4A or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

There are no dependencies

SYDE 161 - Introduction to Design

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

This course is now part of an introduction to design sequence that is held in 1A and 1B. The description now reflects that.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

161

Course Level

100

Title
Introduction to Design

Abbreviated Title
Intro Design

Undergraduate Communication Requirement Identifier
No,

Proposed

Description
In this course, students will learn about engineering design processes, engineering professionalism, and project management, while participating in a team-based design project. Student teams will apply an iterative, human-centered design process and systems perspective to understand, represent, and identify possible targets for design interventions, develop appropriate design specifications, ideate and prototype possible solutions, and evaluate solutions through verification and validation.

Existing

Description
Multidisciplinary system design, the design process, problem definition, life-cycle design, design specification, concept/design generation and evaluation, design for manufacturing and assembly, system modelling and analysis, introduction to mechanical design, prototyping, safety and responsibility in engineering design, design documentation.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 1A
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- BME161 - Introduction to Biomedical Design (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Antirequisites

- BME 161 - Introduction to Biomedical Design View Program

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 212 - Probability, Statistics, and Data Science

Top

Effective Date & Career

Career
Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2024

Offering Number
1

Proposal Details

Proposal Type

Academic Unit Approval

Change,	2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

Data science methods are introduced based on fundamental probability and statistics concepts. Introducing data science in this course provides a solid foundation for a newly introduced core AI course and other machine learning courses.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code
SYDE

Number
212

Course Level
200

Proposed

Title
Probability, Statistics, and Data Science

Existing

Title
Probability and Statistics

Proposed

Abbreviated Title
Probability, Stats & Data Sci

Existing

Abbreviated Title
Probability & Statistics

Undergraduate Communication Requirement Identifier
No,

Proposed

Description
Engineers need to draw upon concepts and techniques from probability and statistics to tackle the challenges posed by uncertain, complex systems, and large, high-dimensional data sets. Provides a strong foundation in probability and statistics as well as an introduction to ideas from data science and machine learning (parameter estimation, detection, classification, dimensionality reduction, Markov chains). Prepares students for upper-level electives that use probabilistic reasoning including AI and machine learning.

Existing

Description
Elementary probability theory. Random variables and distributions. Binomial, Poisson, and normal distributions. Elementary sampling. Statistical estimation. Tests of hypotheses and significance. Regression. Goodness-of-fit tests. Analysis of experimental measurements.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 2B or higher
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Complete all of the following

- Not completed nor concurrently enrolled in:
  - BME213 - Statistics and Experimental Design (0.50)
  - CIVE224 - Probability and Statistics (0.50)
- Not completed nor concurrently enrolled in: ECE316, NE115

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Prerequisites

- ECE 358 - Computer Networks View Program
- ECE 457C - Reinforcement Learning View Program
- SYDE 334 - Applied Statistics View Program

Antirequisites

- BME 213 - Statistics and Experimental Design View Program
- MTE 201 - Experimental Measurement and Statistical Analysis View Program

Prerequisites

- MSE 446 - Introduction to Machine Learning View Program
- MSE 431 - Stochastic Models and Methods View Program
- STAT 331 - Applied Linear Models View Program
- STAT 332 - Sampling and Experimental Design View Program

Antirequisites

- MSE 251 - Probability and Statistics 1 View Program

Prerequisites

- MSE 543 - Analytics and User Experience View Program
- MSE 334 - Operations Planning and Inventory Control View Program
- MSE 452 - Decision Making Under Uncertainty View Program
- MSE 551 - Quality Management and Control View Program
- MSE 422 - Economic Impact of Technological Change and Entrepreneurship View Program
- MSE 432 - Production and Service Operations Management
- MSE 541 - Search Engines View Program View Program

Course Requirements (no units)

- Statistics Option - Statistics Option View Program

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 261 - Culture of Design, Impacts

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

The revised course title better reflects the material being taught.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

261

Course Level

200

Proposed

Title
Culture of Design, Impacts

Existing

Title
Design, Systems, and Society

Proposed

Undergraduate Communication Requirement Identifier

Abbreviated Title
Culture of Design, Impacts

Existing

Abbreviated Title
Design, Systems & Society

No,

Description

This course will help students understand how others think about technology, and then use this knowledge to make better choices when designing. This impact course focuses on identifying, understanding, and analyzing the interactions and impacts among technology, society and the environment for current and emerging technologies using theoretical and evidence-based analyses. Connections among systems of systems engineering, impact analyses, evidence-based analyses, needs assessment, the design process, advocacy, and professional engineering will be discussed and applied.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 2A
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

Course Lists

- Degree Reqs: BASc - Bachelor of Applied Science Degree Requirements [View Program]

Course Requirements (units)

- Society, Technology & Values Diploma - Diploma in Society, Technology and Values [View Program]
- Collaborative Design Specialization - Collaborative Design Specialization [View Program]

SYDE 262 - Engineering Economics and Sustainability

Top

Effective Date & Career

Career
Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

The course is now more explicit in exploring the tradeoffs associated with purely financial aspects and sustainability goals.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code
SYDE

Number
262

Course Level
200

Proposed

Title
Engineering Economics and Sustainability

Existing

Title
Engineering Economics of Design

Proposed

Abbreviated Title
Eng Economics & Sustainability

Existing

Abbreviated Title
Eng Economics of Design

Undergraduate Communication Requirement Identifier
No,

Proposed

Description
The course explores the complex relationship between economic systems and environmental health, analyzing how conventional economic models often conflict with sustainable practices. The concepts addressed are broadly applicable to many professional and personal decisions, including making purchasing decisions, deciding between project alternatives, evaluating different processes, and balancing environmental and social sustainability justice against economic costs. The goal is to develop an understanding of the benefits and limitations of market economies in achieving environmental and social well-being.

Existing

Description
Topics include microeconomics, supply, demand and external costs in the context of systems design. Sustainability indicators, entrepreneurship, engineering economics, comparison of alternatives, project schedules and developing a business plan.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 2B
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- BME364 - Engineering Biomedical Economics (0.50)
- MSE261 - Engineering Economics: Financial Management for Engineers (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Antirequisites

- MSE 261 - Engineering Economics: Financial Management for Engineers View Program
- CIVE 392 - Economics and Life Cycle Cost Analysis View Program
- GEOE 392 - Economics and Life Cycle Cost Analysis View Program
- ENVE 392 - Economics and Life Cycle Cost Analysis View Program
- BME 364 - Engineering Biomedical Economics View Program

Prerequisites

- MSE 422 - Economic Impact of Technological Change and Entrepreneurship View Program

Course Requirements (no units)

- Management Science Option - Management Science Option

Required Courses (Term by Term) View Program

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

Course Lists

- Degree Reqs: BASc - Bachelor of Applied Science Degree Requirements View Program

SYDE 288 - Physics 2: Dynamics

Top

Effective Date & Career

Career
Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

Re-numbering to SYDE 288: course is taught in second year.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Proposed

Number

288

Existing

Number
182

Proposed

Course Level
200

Existing

Course Level
100

Title
Physics 2: Dynamics

Abbreviated Title
Physics 2: Dynamics

Undergraduate Communication Requirement Identifier
No,

Description
Kinematics of particles, rectilinear and curvilinear motion. Kinetics of particles, application to space mechanics. Energy and momentum methods. Systems of particles. Kinematics and kinetics of rigid bodies; planar motion.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete 1 of the following

- Complete all of the following
  - Students must be in level 1B or higher
  - Enrolled in H-Systems Design Engineering
- Complete all of the following
  - Students must be in level 2A or higher
  - Enrolled in H-Mechatronics Engineering

Corequisites

No Rules

Antirequisites

1. Complete all of the following
   - Not completed nor concurrently enrolled in:
   - BME182 - Physics 2: Dynamics (0.50)
   - MTE182 - Physics 2: Dynamics (0.50)
   -
   - **Not completed nor concurrently enrolled in: SYDE182**

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Prerequisites

- ME 547 - Robot Manipulators: Kinematics, Dynamics, Control View Program

Antirequisites

- BME 182 - Physics 2: Dynamics View Program
- NE 131 - Physics for Nanotechnology Engineering View Program
- MTE 182 - Physics 2: Dynamics View Program

Prerequisites

- MTE 321 - Design and Dynamics of Machines View Program
- ME 321 - Dynamics of Machines and Mechanical Vibrations
- BME 550 - Sports Engineering View Program View Program
- BME 551 - Biomechanics of Human Movement View Program

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 362 - Design Testing, Validation, and Verification

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

Changing the name because it is no longer in the same sequence with what was previously Design Methods 1.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

362

Course Level

300

Proposed
Title Design Testing, Validation, and Verification
Existing
Title Systems Design Methods 2: Testing, Verification, and Validation

Proposed

Abbreviated Title
Test, Verify & Validate

Existing

Abbreviated Title
Meth 2: Test, Verif & Validate

Undergraduate Communication Requirement Identifier
No,

Description
Engineering design project course where students work in small groups applying the principles of engineering problem solving and design, with a focus on testing and design evaluation, and an introduction to benchmark testing and applied design optimization. Student projects will provide hands-on experience with design verification, validation, and performance measurement and analysis using engineering tools.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LaboratoryLecture

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 3B
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- BME362 - Biomedical Engineering Design Workshop 1 (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 461 - Systems Design Engineering Capstone Project 1

Top

Effective Date & Career

Career
Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

Updating components to project to better reflect the course type and maintain consistency with other programs.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

461

Course Level

400

Proposed

Title
Systems Design Engineering Capstone Project 1

Existing

Title
Systems Design Capstone Project 1

Abbreviated Title
Capstone Project 1

Undergraduate Communication Requirement Identifier
No,

Description
The first half of a two-term engineering design project continuing the systems design project sequence. Students work in small groups applying the principles of systems design engineering to a situation of concern of their own choosing. Students have individual project supervisors as well as an overall co-ordinator who provides the framework for the term assessments.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Proposed

Components
Project

Existing

Components
Laboratory Lecture

Proposed

Primary Component
Project

Existing

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add

Consent to Drop

No consent required,

Department consent required,

Prerequisites

Complete all of the following

- Students must be in level 4A
- Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- BME461 - Biomedical Engineering Design Workshop 2 (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Dependencies

Antirequisites

- BME 461 - Biomedical Engineering Design Workshop 2 View Program

Course Requirements (no units)

- Medical Artificial Intelligence Specialization - Medical Artificial Intelligence Specialization View Program
- Medical Devices Specialization - Medical Devices Specialization
- Sports Engineering Specialization - Sports Engineering Specialization View Program
- Neural Engineering Specialization - Neural Engineering Specialization View Program
- Mechatronics Option - Mechatronics Option View Program
- Biomechanics Option - Biomechanics Option View Program

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 462 - Systems Design Engineering Capstone Project 2

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

Updating components to project to better reflect the course type and maintain consistency with other programs.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

462

Course Level

400

Proposed

Title

Systems Design Engineering Capstone Project 2

Existing

Title

Systems Design Capstone Project 2

Abbreviated Title

Capstone Project 2

Undergraduate Communication Requirement Identifier

No,

Description
The second half of a two-term engineering design project continuing the systems design project sequence. Students work in small groups applying the principles of systems design engineering to a situation of concern of their own choosing. Students have individual project supervisors as well as an overall co-ordinator who provides the framework for the term assessments.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Proposed

Components
Project

Existing

Components
Laboratory Lecture

Proposed

Primary Component
Project

Existing

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Is this course cross-listed?
No,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
Department consent required,

Prerequisites

1. Complete all of the following
   - **Must have completed the following:**
   - **SYDE461 - Systems Design Capstone Project 1 (0.50)**
   -
   - Students must be in level 4B
   - Enrolled in H-Systems Design Engineering

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- BME462 - Biomedical Engineering Design Workshop 3 (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Antirequisites

- BME 462 - Biomedical Engineering Design Workshop 3

Course Requirements (no units) View Program

- Medical Artificial Intelligence Specialization - Medical Artificial Intelligence Specialization View Program
- Medical Devices Specialization - Medical Devices Specialization
- Sports Engineering Specialization - Sports Engineering Specialization View Program
- Neural Engineering Specialization - Neural Engineering Specialization View Program
- Mechatronics Option - Mechatronics Option View Program
- Biomechanics Option - Biomechanics Option View Program

Required Courses (Term by Term)

- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

SYDE 522 - Foundations of Artificial Intelligence

Top

Effective Date & Career

Career
Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

Cross-listing with BME 522 - identical course.

Consultations

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code
SYDE

Number
522

Course Level
500

Title
Foundations of Artificial Intelligence

Abbreviated Title
Foundations of AI

Undergraduate Communication Requirement Identifier
No,

Description
The objective of this course is to introduce students to fundamental concepts of artificial intelligence. An overview of different learning schemes will be provided, including supervised and unsupervised algorithms. The focus of this course will be on dimensionality reduction, clustering, classification, deep and shallow artificial neural networks, and reinforcement learning. Ethical aspects of artificial intelligence will be discussed.

Units
0.50

Exceptions to Fees or Academic Progress Units
No,

Components
LectureTutorial

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Proposed

Is this course cross-listed?
Yes,

Existing

Is this course cross-listed?
No,

Proposed

Cross-Listed Courses

BME 522 - Foundations of Artificial Intelligence

Existing

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
No consent required,

Prerequisites

Complete all of the following

- Complete 1 of the following
  - Must have completed at least 1 of the following:
    - BME122 - Data Structures and Algorithms (0.50)
    - CS240 - Data Structures and Data Management (0.50)
    - CS240E - Data Structures and Data Management (Enriched) (0.50)
    - ECE250 - Algorithms and Data Structures (0.50)
    - MSE240 - Algorithms and Data Structures (0.50)
    - MTE140 - Algorithms and Data Structures (0.50)
    - SYDE223 - Data Structures and Algorithms (0.50)
  - Must have completed the following: MSCI240
- Complete 1 of the following
  - Enrolled in H-Biomedical Engineering, or H-Systems Design Engineering
  - Complete all of the following
    - Students must be in level 4A or higher
    - Enrolled in Computer Engineering Option, H-Management Engineering, H-Mechatronics Engineering, or Mechatronics Option

Corequisites

No Rules

Antirequisites

1. Not completed nor concurrently enrolled in:
   - **Course Not Found**

- CS480 - Introduction to Machine Learning (0.50)
- CS486 - Introduction to Artificial Intelligence (0.50)
- ECE457A - Co-operative and Adaptive Algorithms (0.50)
- ECE457B - Fundamentals of Computational Intelligence (0.50)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Antirequisites

- ECE 457B - Fundamentals of Computational Intelligence
- CS 486 - Introduction to Artificial Intelligence View Program
- MSE 446 - Introduction to Machine Learning View Program

View Program

Prerequisites

- MSE 546 - Advanced Machine Learning View Program

Course Requirements (no units)

- Medical Artificial Intelligence Specialization - Medical Artificial Intelligence Specialization View Program
- Intelligent & Automated Systems Specialization - Intelligent and Automated Systems Specialization View Program
- Management Science Option - Management Science Option View Program

Course Lists

- Computing Option - Computing Option View Program
- Computer Engineering Option - Computer Engineering Option
- Software Engineering Option - Software Engineering Option View Program View Program

Course Requirements (no units)

- Artificial Intelligence Option - Artificial Intelligence Option
- Neural Engineering Specialization - Neural Engineering Specialization View Program View Program
- Mechatronics Option - Mechatronics Option View Program

Course Lists

- H-Mechanical Engineering - Mechanical Engineering (Bachelor of Applied Science - Honours) View Program

Course Requirements (no units)

- Cognitive Science Minor - Cognitive Science Minor View Program

Course Lists

- H-Biomedical Engineering - Biomedical Engineering (Bachelor of Applied Science - Honours) View Program
- H-Electrical Engineering - Electrical Engineering (Bachelor of Applied Science - Honours) View Program
- H-Computer Engineering - Computer Engineering (Bachelor of Applied Science - Honours) View Program
- H-Environmental Engineering - Environmental Engineering (Bachelor of Applied Science - Honours) View Program
- H-Mechatronics Engineering - Mechatronics Engineering (Bachelor of Applied Science - Honours) View Program

- H-Nanotechnology Engineering - Nanotechnology Engineering (Bachelor of Applied Science - Honours) View Program
- H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours) View Program

Course Requirements (no units)

- Modelling & Data Analytics Specialization - Modelling and Data Analytics Specialization View Program

SYDE 534 - Electric Energy Systems

Top

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number
1

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-19

Last Offering of Course

Retired Impact

Retired Impact Details

Unit Weight/Number Changes

High Impact Changes - Please Read

Rationale for New Course

Rationale for Change

SYDE534: Electric Energy Systems has been 'Held With' ENBUS475: Electric Energy Systems for the past few years. ENBUS475 is the special topic course code for the Environment and Business (ENBUS) program. As ENBUS concurrently pursues a new, permanent course code for the course in ENBUS (ENBUS434) the need to change the arrangement from a Held With to a Cross Listed course has emerged.

A cross listed course is the most appropriate at the courses are identical in content, delivery, and assessment.

Related agenda proposal:

- ENVS434

Consultations

Consultations have been made with faculty at SYDE, SEED, and the ENV Associate Director of Undergraduate Studies.

Supporting Documentation

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

534

Course Level

500

Title

Electric Energy Systems

Abbreviated Title

Electric Energy Systems

Undergraduate Communication Requirement Identifier

No,

Description

Traditional electric energy systems comprising generation, transmission, and distribution are examined. Emerging technologies and trends are considered, such as competition, smart grids, energy storage, demand side management, renewable energy, and P2P. Future challenges and possibilities are then explored. Issues will be explored from technical, economic, environmental, sustainability, and social perspectives.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Primary Component

LectureTutorial	Lecture

Grading Information

Standard Course Grading
Yes,

Special Course Grading

Grading Basis

Cross-Listing Information

Proposed

Is this course cross-listed?
Yes,

Existing

Is this course cross-listed?
No,

Proposed

Cross-Listed Courses

ENVS 434 - Electric Energy Systems

Existing

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Total Completions Allowed

Allow Multiple Enrol in a Term

Enrolment Rules

Consent to Add
No consent required,

Consent to Drop
No consent required,

Prerequisites

Complete all of the following

- Students must be in level 3A or higher
- Complete 1 of the following
  - Enrolled in H-Software Engineering
  - Enrolled in a BASc program

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in: SYDE599 (Topic 10: Electric Energy Systems)

Course Notes

Fee Statement

Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Faculty of Environment

Dependencies

Course Requirements (no units)

- Societal & Environmental Systems Specialization - Societal and Environmental Systems Specialization View Program

H-Systems Design Engineering - Systems Design Engineering (Bachelor of Applied Science - Honours)

Top

Effective Date and Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-18

Quality Assurance Designation
Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Required PD courses dropping from five to four.

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Yes,

Co-operative Education Consultation

The Faculty of Engineering currently requires all students to take 5 PD courses (PD19, PD20 and 3 electives). We are proposing a reduction to 4 (PD19, PD20 and 2 electives). Some programs specify additional required courses (e.g., PD10, PD11, PD22) which reduce the number of electives.

Most faculties take PD1 during the first recruiting term. Instead of PD1, Engineering students take Co-op Fundamentals for Engineering in their 1A term.

Reducing the number of PD courses is an effort to reduce workload for Engineering students, ensuring they still meet their CEAB and Co-op (CEWIL) graduation requirements.

This change will be made for all active students, effective immediately. Current students will be told that they

only require 4 PD courses (in addition to CFE) to meet graduation requirements. If students choose to take a 5*th* PD course, that will be permitted.

This change has been approved by the Provost, Centre for WIL, IAP and the AVP Co-operative & Experiential Education. This change has been approved by Engineering Department Chairs, and based on approval at Faculty Council, all BASc and BSE plans are being updated accordingly.

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Rationale: The rationale behind the changes are the following:

1. Replacing the SYDE math courses with Math math courses provides flexibility for our students who require to repeat. Currently SYDE courses are offered once a year only.

2. The change of the co-op stream from 4S to 8X helps build SYDE community and provides more time for our students to acclimatize to systems thinking and engineering design methodology.

3. The new socio-environmental courses were missing in the current curriculum and they provide a foundation for our students in this area, in particular for pursuing the specialization and having more breadth to be systems design engineers.

4. There are explicit design and a system spline of courses which speaks to our program's identity.

5. A new AI course in 3rd year is relevant for current times. That course overlaps more than 70% with the existing SYDE 522 course.

6. There is now no need for a CEAB planner.

7. Removing seminar courses 102, 201, 202, 301, 302, 401, 402. The rationale is that they are poorly attended and we are in the midst of thinking of other ways to exchange our students with monthly workshops.

Course change count:

If we include rows 1 & 3, total changed units is only 4.0 units or 18.5%. We would like to argue that row 2 is not a substantial change since it is a swapping of existing content delivered by Syde to content now delivered by Math. If we include row 2, that is a change 6.0 units or 27.7%.

(see added file below)

Consultations (Departmental)

Approved by Math ADUG Benoit Charbonneau – June 2025

Supporting Documentation

- syde FUGS QA consult review table.pdf

General Program/Plan Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Faculty

Faculty of Engineering

Undergraduate Credential Type

Major

Program Type

Honours

Degree

Bachelor of Applied Science

Program/Plan Name

Systems Design Engineering (Bachelor of Applied Science - Honours)

Systems of Study

Co-operative,

Admissions

Admissions Entry Point
Direct Entry,

Requirements Information

Invalid Combinations
No,

Average Requirement
Yes,

Minimum Average(s) Required

- A minimum cumulative overall average of 60.0%.
- A minimum term average of 60.0%. See promotion rules.

Proposed

Graduation Requirements

- Complete a total of 21.63 units (excluding COOP, PD):
  - Complete all the required courses listed below.
  - Complete eight approved electives:
    - Complete a minimum of three Complementary Studies Electives (CSEs) from the Complementary Studies Course Lists for Engineering:
      - One course from List C.
      - Two or more courses from List A, B, C, or D. One CSE must be a STV course.
    - Complete a minimum of four courses from the Technical Electives (TEs) lists.
    - The eighth elective is chosen from either the CSE or TE lists.
- Complete all co-operative education program requirements listed below.

Existing

Graduation Requirements

- Complete a total of 21.63 units (excluding COOP, PD):
  - Complete all the required courses listed below.
  - Complete 10 approved electives:
    - Complete a minimum of three Complementary Studies Electives (CSEs) from the Complementary Studies Course Lists for Engineering:
      - One course from List C.
      - Two or more courses from List A, B, C, or D.
    - Complete a minimum of six courses from the Technical Electives (TEs) lists.
    - The tenth elective is chosen from either the CSE or TE lists.
    - Choices must meet the Canadian Engineering Accreditation Board (CEAB) requirements (see below).
- Complete all co-operative education program requirements listed below.

CEAB planner

Elective course selections must meet CEAB requirements, including a minimum number of instruction hours in the various CEAB categories. To determine the suitability of elective courses, students should complete the CEAB planner. Two planners must be completed and submitted to the undergraduate co-ordinator, one planner for approval purposes in the student's 3A term, and one planner for graduation purposes at the end of the student's 4A term. Students that have combinations of electives that result in a plan that does not meet CEAB criteria will not be permitted to graduate.

Proposed

Co-operative Education Program Requirements

- Complete a total of four PD courses: PD11, PD19, PD20, and one additional PD courses.
- Complete a total of five credited work terms.
- See Bachelor of Applied Science co-operative education program requirements.

Existing

Co-operative Education Program Requirements

- Complete a total of five PD courses: PD11, PD19, PD20, and two additional PD courses.
- Complete a total of five credited work terms.
- See Bachelor of Applied Science co-operative education program requirements.

1. 1A Term
    -
    - Complete all the following:
    - **MATH115 - Linear Algebra for Engineering (0.50)**
    - **MATH117 - Calculus 1 for Engineering (0.50)**
    - SYDE101 - Communications in Systems Design Engineering-Written and Oral (0.25)
    - SYDE121 - Digital Computation (0.50)
    - **Course Not Found**
    - SYDE161 - Introduction to Design (0.50)
    -
    - 1B Term
    -
    - Complete all the following:
    - **MATH119 - Calculus 2 for Engineering (0.50)**
    - SYDE101L - Communications in Systems Design Engineering-Visualization (0.25)
    - **Course Not Found**
    - SYDE162 - Human Factors in Design (0.50)
    - **Course Not Found**
    - SYDE181 - Physics 1: Statics (0.50)
    -
    - 2A Term

-
- Complete all the following:
- SYDE182 - Physics 2: Dynamics (0.50)
- **Course Not Found**
- SYDE223 - Data Structures and Algorithms (0.50)
- SYDE252 - Linear Systems and Signals (0.50)
- SYDE261 - Design, Systems, and Society (0.50)
- SYDE263 - Engineering Prototyping (0.25)
-
- 2B Term
-
- Complete all the following:
- **MATH218 - Differential Equations for Engineers (0.50)**
- SYDE192L - Digital Systems Laboratory (0.25)
- SYDE212 - Probability and Statistics (0.50)
- **Course Not Found**
- **Course Not Found**
- SYDE292 - Circuits, Instrumentation, and Measurements (0.50)
-
- 3A Term
-
- Complete all the following:
- SYDE262 - Engineering Economics of Design (0.50)
- SYDE292L - Circuits, Instrumentation, and Measurements Laboratory (0.25)
- **Course Not Found**
- SYDE351 - Systems Models 1 (0.50)
- SYDE362 - Systems Design Methods 2: Testing, Verification, and Validation (0.50)
- **Course Not Found**
-
- 3B Term
-
- Complete all of the following
- Complete all the following:
- SYDE352 - Introduction to Control Systems (0.50)
- SYDE352L - Control Systems Laboratory (0.25)
- **Course Not Found**
- **Course Not Found**
- SYDE411 - Optimization and Numerical Methods (0.50)
-
- Complete 1 approved elective
-
- 4A Term
-
- Complete all of the following
- Complete all the following:
- **Course Not Found**
- SYDE461 - Systems Design Capstone Project 1 (0.50)
- SYDE532 - Introduction to Complex Systems (0.50)
-

- Complete 3 approved electives
-
- 4B Term
-
- Complete all of the following
- Complete all the following:
- SYDE462 - Systems Design Capstone Project 2 (0.50)
-
- Complete 4 approved electives
- ~~SYDE111 - Calculus 1 (0.50)~~
- ~~SYDE113 - Elementary Engineering Mathematics (0.25)~~
- ~~SYDE102 - Seminar (0.00)~~
- ~~SYDE112 - Calculus 2 (0.50)~~
- ~~SYDE114 - Matrices and Linear Systems (0.25)~~
- ~~SYDE192 - Digital Systems (0.50)~~
- ~~SYDE201 - Seminar (0.00)~~
- ~~SYDE211 - Calculus 3 (0.50)~~
- ~~SYDE283 - Physics 3: Electricity, Magnetism and Optics (0.50)~~
- ~~SYDE285 - Materials Chemistry (0.50)~~
- ~~SYDE202 - Seminar (0.00)~~
- ~~SYDE286 - Mechanics of Deformable Solids (0.50)~~
- ~~SYDE301 - Seminar (0.00)~~
- ~~SYDE312 - Applied Linear Algebra (0.50)~~
- ~~SYDE361 - Systems Design Methods 1: Needs Analysis and Prototyping (0.50)~~
- ~~SYDE381 - Thermodynamics (0.50)~~
- ~~SYDE383 - Fluid Mechanics (0.50)~~
- ~~SYDE300 - Work-Term Symposium Poster (0.13)~~
- ~~SYDE302 - Seminar (0.00)~~
- ~~Complete 2 approved electives~~
- ~~SYDE401 - Seminar (0.00)~~
- ~~SYDE402 - Seminar (0.00)~~

1. Technical Electives List
   -
   - Complete 6 of the following:
   - BME499 - Elective Biomedical Research Project (0.50)
   - **Course Not Found**
   - BME544 - Biomedical Measurement and Signal Processing (0.50)
   - BME550 - Sports Engineering (0.50)
   - BME551 - Biomechanics of Human Movement (0.50)
   - BME581 - Ultrasound in Medicine and Biology (0.50)
   - BME587 - Special Topics in Biomedical Signals (0.50)
   - BME588 - Special Topics in Biomechanics (0.50)
   - BME589 - Special Topics in Biomedical Devices (0.50)
   - CIVE440 - Transit Planning and Operations (0.50)
   - CIVE460 - Engineering Biomechanics (0.50)
   - ECE356 - Database Systems (0.50)

- ECE358 - Computer Networks (0.50)
- ECE406 - Algorithm Design and Analysis (0.50)
- ECE457B - Fundamentals of Computational Intelligence (0.50)
- ECE459 - Programming for Performance (0.50)
- ECE484 - Digital Control Applications (0.50)
- PLAN478 - Transit Planning and Operations (0.50)
- ME321 - Dynamics of Machines and Mechanical Vibrations (0.50)
- ME574 - Engineering Biomechanics (0.50)
- MSE343 - Human-Computer Interaction (0.50)
- MSE432 - Production and Service Operations Management (0.50)
- MSE446 - Introduction to Machine Learning (0.50)
- MSE555 - Scheduling: Theory and Practice (0.50)
- MTE241 - Introduction to Computer Structures and Real-Time Systems (0.50)
- MTE325 - Microprocessor Systems and Interfacing for Mechatronics Engineering (0.50)
- MTE544 - Autonomous Mobile Robots (0.50)
- SYDE322 - Software Design (0.50)
- SYDE334 - Applied Statistics (0.50)
- SYDE522 - Foundations of Artificial Intelligence (0.50)
- SYDE531 - Design Optimization Under Probabilistic Uncertainty (0.50)
- SYDE532 - Introduction to Complex Systems (0.50)
- SYDE533 - Conflict Resolution (0.50)
- SYDE542 - Interface Design (0.50)
- SYDE543 - Cognitive Ergonomics (0.50)
- SYDE544 - Biomedical Measurement and Signal Processing (0.50)
- SYDE548 - User Centred Design Methods (0.50)
- SYDE552 - Computational Neuroscience (0.50)
- SYDE553 - Advanced Dynamics (0.50)
- SYDE556 - Simulating Neurobiological Systems (0.50)
- SYDE572 - Introduction to Pattern Recognition (0.50)
- SYDE575 - Image Processing (0.50)
- SYDE584 - Physiological Systems and Biomedical Design (0.50)
- SYDE599 - Special Topics in Systems Design Engineering (0.50)

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

Some cross-listings not to be counted,

Removing Cross-Lists

BIOL487 (CL with SYDE552) removed at Feb 2024 SUC

Proposed

Additional Constraints

1. Exceptions to the requirements and electives listed above require prior approval of the Director, Systems Design Engineering program.

Existing

Additional Constraints

1. Students can also take technical electives on other topics. Only courses from Engineering will contribute towards CEAB hours in the categories of "Engineering Science" and "Engineering Design".
2. Exceptions to the requirements and electives listed above require prior approval of the Director, Systems Design Engineering program.

Specializations

Specializations for this Major

Yes - Optional,

Specialization Details

Students may choose to focus their elective choices by completing one of four available specializations.

Specializations List

Human Factors & Interfaces Specialization, Intelligent & Automated Systems Specialization, Physical & Mechatronics Systems Specialization, or Societal & Environmental Systems Specialization

Undergraduate Plan Guidelines

Workflow Information

Change to Undergraduate Communication Requirement

No,

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Dependencies

Date 2026/01/14

Show Empty Fields

Meeting Information

Agenda Page TitleSUC - 2026-02 - Regular Agenda - Faculty of Environment

Career Level
Undergraduate,

Faculty/UnitFaculty of Environment

Date2026-02-04 **Time10:0am** **LocationNH3318**

Summary

Other Business

Attachment(s)

Course Proposals

Course Proposal Details

Courses: Retire No proposals have been added.

Courses: New No proposals have been added.

Courses: Changes No proposals have been added.

Programs & Plans Proposals

Programs & Plans Proposal Details

Major Modifications:

- **Geographic Information Systems Certificate: new**
- **Environment, Society and Well-Being Specialization (GEM): new**
- **Remote Sensing Specialization (GEM): new**

Programs & Plans: Retire No proposals have been added.

Programs & Plans: Major Modifications

Code	Title	Type	Workflow Step
CEC-Environment, Society & Well-Being Specialization	Environment, Society and Well-Being Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee
G-Environment, Society & Well-Being Specialization	Environment, Society and Well-Being Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee
GA-Environment, Society & Well-Being Specialization	Environment, Society and Well-Being Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee
GEM-Environment, Society & Well-Being Specialization	Environment, Society and Well-Being Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee
Geographic Information Systems Certificate	Certificate in Geographic Information Systems	Programs	SUC Subcommittee, SUC Curricular Subcommittee
CEC-Remote Sensing Specialization	Remote Sensing Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee
GA-Remote Sensing Specialization	Remote Sensing Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee
GEM-Remote Sensing Specialization	Remote Sensing Specialization	Programs	SUC Subcommittee, SUC Curricular Subcommittee

Programs & Plans: Minor Modifications No proposals have been added.

Regulations Proposals

Regulations Proposal Details

Academic term unit load: rewording to accommodate a process change

Regulations: Retire No proposals have been added.

Regulations: New No proposals have been added.

Regulations: Changes

Code	Title	Type	Workflow Step
UG-ENV-Courses and Classes	Environment: Courses and Classes	Policies	SUC Subcommittee, SUC Curricular Subcommittee

CEC-Environment, Society & Well-Being Specialization - Environment, Society and Well-Being Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-24

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization,

undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
No,

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.

2. Avoid overlap in course requirements with other specializations.

3. Ensure all courses align with the learning objectives of the specializations.

For the economy and society specialization, there was consensus that students could focus on either economy/development themes or well-being themes. Hence it was decided to split the specializations into two separate streams (one for economy and development and a new specialization for well-being).

Related agenda proposals:

- G-Environment, Society and Well-being Specialization
- GA-Environment, Society and Well-being Specialization
- GEM-Environment, Society and Well-being Specialization

Consultations (Departmental)

Consultations with other units whose courses are included in specialization, including SERS, PLAN, PSCI, and HLTH. All are in agreement with their courses being used for the specialization.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty
Faculty of Environment

Undergraduate Credential Type
Specialization

Program/Plan Name
Environment, Society and Well-Being Specialization

Admissions

Specialization is available for students in the following majors

H-Climate & Environmental Change

Admissions Entry Point
Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a Plan Modification Form.

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.
  - 1.0 unit must be at the 400-level.

Course Requirements (units)

Required Courses

- 2.5Units to Complete
- Complete 5 of the following:
  - ERS316 - Urban Water and Wastewater Systems: Integrated Planning and Management (0.50)
  - ERS361 - Food Systems and Sustainability (0.50)
  - ERS365 - Water Governance (0.50)
  - ERS460 - Sustainable Food: Regional Case Study (0.50)
  - ERS462 - Global Food and Agricultural Politics (0.50)
  - GEOG306 - Human Dimensions of Natural Hazards (0.50)
  - GEOG325 - Geographies of Health (0.50)
  - GEOG351 - Geography of Transportation (0.50)
  - GEOG361 - Food Systems and Sustainability (0.50)
  - GEOG432 - Health and the Built Environment (0.50)
  - GEOG460 - Sustainable Food: Regional Case Study (0.50)
  - GEOG462 - Global Food and Agricultural Politics (0.50)
  - HLTH370 - Ecological Determinants of Health (0.50)
  - HLTH420 - Health and the Built Environment (0.50)
  - PLAN380 - Crime and the City (0.50)
  - PLAN432 - Health and the Built Environment (0.50)
  - PSCI488 - Global Food and Agricultural Politics (0.50)
- Grand Total Units: 2.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path	Faculty/AFIW Path(s) for Workflow

Committee approvals,

Faculty of Environment

Dependencies

G-Environment, Society & Well-Being Specialization - Environment, Society and Well-Being Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-24

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
No,

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.

2. Avoid overlap in course requirements with other specializations.

3. Ensure all courses align with the learning objectives of the specializations.

For the economy and society specialization, there was consensus that students could focus on either economy/development themes or well-being themes. Hence it was decided to split the specializations into two separate streams (one for economy and development and a new specialization for well-being).

Related agenda proposals:

- CEC-Environment, Society and Well-being Specialization
- GA-Environment, Society and Well-being Specialization
- GEM-Environment, Society and Well-being Specialization

Consultations (Departmental)

Consultations with other units whose courses are included in specialization, including SERS, PLAN, PSCI, and HLTH. All are in agreement with their courses being used for the specialization.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty
Faculty of Environment

Undergraduate Credential Type
Specialization

Program/Plan Name
Environment, Society and Well-Being Specialization

Admissions

Specialization is available for students in the following majors

H-Geomatics

Admissions Entry Point
Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a Plan Modification Form.

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.
  - 1.0 unit must be at the 400-level.

Course Requirements (units)

Required Courses

- 2.5Units to Complete
- Complete 5 of the following:
  - ERS316 - Urban Water and Wastewater Systems: Integrated Planning and Management (0.50)
  - ERS361 - Food Systems and Sustainability (0.50)
  - ERS365 - Water Governance (0.50)
  - ERS460 - Sustainable Food: Regional Case Study (0.50)
  - ERS462 - Global Food and Agricultural Politics (0.50)
  - GEOG306 - Human Dimensions of Natural Hazards (0.50)

    - GEOG325 - Geographies of Health (0.50)
    - GEOG351 - Geography of Transportation (0.50)
    - GEOG361 - Food Systems and Sustainability (0.50)
    - GEOG432 - Health and the Built Environment (0.50)
    - GEOG460 - Sustainable Food: Regional Case Study (0.50)
    - GEOG462 - Global Food and Agricultural Politics (0.50)
    - HLTH370 - Ecological Determinants of Health (0.50)
    - HLTH420 - Health and the Built Environment (0.50)
    - PLAN380 - Crime and the City (0.50)
    - PLAN432 - Health and the Built Environment (0.50)
    - PSCI488 - Global Food and Agricultural Politics (0.50)
- Grand Total Units: 2.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

Top

GA-Environment, Society & Well-Being

Specialization - Environment, Society and Well-Being Specialization

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-24

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for New Program/Plan

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.

2. Avoid overlap in course requirements with other specializations.

3. Ensure all courses align with the learning objectives of the specializations.

For the economy and society specialization, there was consensus that students could focus on either economy/development themes or well-being themes. Hence it was decided to split the specializations into two separate streams (one for economy and development and a new specialization for well-being).

Related agenda proposals:

- CEC-Environment, Society and Well-being Specialization
- G-Environment, Society and Well-being Specialization
- GEM-Environment, Society and Well-being Specialization

Consultations (Departmental)

Consultations with other units whose courses are included in specialization, including SERS, PLAN, PSCI, and HLTH. All are in agreement with their courses being used for the specialization.

General Program/Plan Information

Faculty **Academic Unit**

Faculty of Environment

Department of Geography and Environmental Management

Faculty
Faculty of Environment

Undergraduate Credential Type
Specialization

Program/Plan Name
Environment, Society and Well-Being Specialization

Admissions

Specialization is available for students in the following majors

H-Geography & Aviation

Admissions Entry Point
Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a Plan Modification Form.

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.
  - 1.0 unit must be at the 400-level.

Course Requirements (units)

Required Courses

- 2.5Units to Complete
- Complete 5 of the following:
  - ERS316 - Urban Water and Wastewater Systems: Integrated Planning and Management (0.50)
  - ERS361 - Food Systems and Sustainability (0.50)
  - ERS365 - Water Governance (0.50)
  - ERS460 - Sustainable Food: Regional Case Study (0.50)
  - ERS462 - Global Food and Agricultural Politics (0.50)
  - GEOG306 - Human Dimensions of Natural Hazards (0.50)
  - GEOG325 - Geographies of Health (0.50)
  - GEOG351 - Geography of Transportation (0.50)
  - GEOG361 - Food Systems and Sustainability (0.50)
  - GEOG432 - Health and the Built Environment (0.50)
  - GEOG460 - Sustainable Food: Regional Case Study (0.50)
  - GEOG462 - Global Food and Agricultural Politics (0.50)
  - HLTH370 - Ecological Determinants of Health (0.50)
  - HLTH420 - Health and the Built Environment (0.50)
  - PLAN380 - Crime and the City (0.50)
  - PLAN432 - Health and the Built Environment (0.50)

    - PSCI488 - Global Food and Agricultural Politics (0.50)
- Grand Total Units: 2.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

GEM-Environment, Society & Well-Being Specialization - Environment, Society and Well-Being Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-24

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
No,

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.

2. Avoid overlap in course requirements with other specializations.

3. Ensure all courses align with the learning objectives of the specializations.

For the economy and society specialization, there was consensus that students could focus on either economy/development themes or well-being themes. Hence it was decided to split the specializations into two separate streams (one for economy and development and a new specialization for well-being).

Related agenda proposals:

- CEC-Environment, Society and Well-being Specialization
- G-Environment, Society and Well-being Specialization
- GA-Environment, Society and Well-being Specialization

Consultations (Departmental)

Consultations with other units whose courses are included in specialization, including SERS, PLAN, PSCI, and HLTH. All are in agreement with their courses being used for the specialization.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type
Specialization

Program/Plan Name
Environment, Society and Well-Being Specialization

Admissions

Specialization is available for students in the following majors

H-Geography & Environmental Management, or JH-Geography & Environmental Management

Admissions Entry Point
Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a Plan Modification Form.

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.
  - 1.0 unit must be at the 400-level.

Course Requirements (units)

Required Courses

- 2.5Units to Complete
- Complete 5 of the following:
  - ERS316 - Urban Water and Wastewater Systems: Integrated Planning and Management (0.50)
  - ERS361 - Food Systems and Sustainability (0.50)
  - ERS365 - Water Governance (0.50)
  - ERS460 - Sustainable Food: Regional Case Study (0.50)
  - ERS462 - Global Food and Agricultural Politics (0.50)
  - GEOG306 - Human Dimensions of Natural Hazards (0.50)
  - GEOG325 - Geographies of Health (0.50)
  - GEOG351 - Geography of Transportation (0.50)
  - GEOG361 - Food Systems and Sustainability (0.50)
  - GEOG432 - Health and the Built Environment (0.50)
  - GEOG460 - Sustainable Food: Regional Case Study (0.50)
  - GEOG462 - Global Food and Agricultural Politics (0.50)
  - HLTH370 - Ecological Determinants of Health (0.50)
  - HLTH420 - Health and the Built Environment (0.50)
  - PLAN380 - Crime and the City (0.50)
  - PLAN432 - Health and the Built Environment (0.50)
  - PSCI488 - Global Food and Agricultural Politics (0.50)
- Grand Total Units: 2.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

Geographic Information Systems Certificate - Certificate in Geographic Information Systems

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Other

Recruitment Materials
No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

Invalid combination with Dip of Excellence in GIS, H-Geomatics, and JH-Geomatics

Change to Learning Outcomes

No,

Rationale and Background for New Program/Plan

These three courses are skills-based courses which, collectively, lead to mastery in using Geographic/ Geospatial Information Systems. Applied GIS skills are helpful in urban planning, most environmental management and natural resource sectors, public health, emergency management, agriculture and many others. All three of these courses are offered both in person and online, and all have experiential components through required labs.

GEOG181, GEOG381, and GEOG381 will be changed to the new subject code GDS181, GDS281, and GDS381 upon SUC approval.

This certificate will be able to be completed on-line (asynchronous) as of Fall 2026.

Related agenda proposals:

- Diploma in GIS
- H-Geomatics
- JH-Geomatics

Consultations (Departmental)

Consultations with the ADUGs, Registrar's Office, and Editor of the Calendar regarding the qualifications for a certificate.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty
Faculty of Environment

Undergraduate Credential Type
Certificate

Program/Plan Name
Certificate in Geographic Information Systems

Admissions

Admissions Entry Point
Declare Plan,

Declaration Audience

This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.This credential is open to students enrolled in any degree program.

Requirements Information

Invalid Combinations

Yes,

List of Invalid Combinations

Geomatics (Bachelor of Environmental Studies - Honours)

Geomatics (Joint Honours)

Diploma of Excellence in Geographic Information Systems

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative certificate average of 65.0%.

Graduation Requirements

- Complete a total of 1.5 units.

Course Requirements (units)

Required Courses

- 1.5Units to Complete
- Complete all of the following
  - Complete 1 of the following:
    - GEOG181 - Designing Effective Maps (0.50)
    - PLAN205 - Spatial and Demographic Analysis in Planning (0.50)
  - Complete 1 of the following:
    - GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)
    - PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)
  - Complete 1 of the following:
    - GEOG381 - Advanced Geographic Information Systems (0.50)
    - PLAN381 - Advanced Geographic Information Systems (0.50)
- Grand Total Units: 1.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines
Yes,

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

CEC-Remote Sensing Specialization - Remote Sensing Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-24

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
No,

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our departmental specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.

2. Avoid overlap in course requirements with other specializations.

3. Ensure all courses align with the learning objectives of the specializations.

For the Geomatics specialization, there was consensus that students can focus on developing their skillset in either GIS or remote sensing, and so the specialization is being divided into two separate credentials (one for GIS and one for remote sensing). Previously, the specialization included both course streams.

Further this revision ensures student skillsets, as presented on their degree, will offer greater clarity. The term 'Geomatics' is often associated with surveying, so the change to reference 'remote sensing' is clearer.

GEOG371, GEOG387, GEOG471, and GEOG270 will be changed to the new subject code GDS371, GDS387, GDS471, and GDS270 upon SUC approval.

Related proposals:

- G-Remote Sensing Specialization
- GA-Remote Sensing Specialization

Consultations (Departmental)

Consultations with Planning regarding cross-listed courses occurred at a meeting held on Sept. 17, 2025. Planning expressed support and will be submitting a proposal to remove cross-list with GEOG 387.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type
Specialization

Program/Plan Name
Remote Sensing Specialization

Admissions

Specialization is available for students in the following majors

H-Climate & Environmental Change

Admissions Entry Point
Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a Plan Modification Form.

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.

Course Requirements (units)

Required Courses

- 2.5Units to Complete
- Complete all of the following
  - Complete all the following:
    - GEOG371 - Advanced Remote Sensing Techniques (0.50)
    - GEOG387 - Spatial Databases (0.50)
    - GEOG471 - Remote Sensing Project (1.00)
  - Complete 1 of the following:
    - AVIA270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
    - GEOG270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
- Grand Total Units: 2.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

GA-Remote Sensing Specialization - Remote Sensing Specialization

Top

Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-24

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
No,

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our departmental specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.

2. Avoid overlap in course requirements with other specializations.

3. Ensure all courses align with the learning objectives of the specializations.

For the Geomatics specialization, there was consensus that students can focus on developing their

skillset in either GIS or remote sensing, and so the specialization is being divided into two separate credentials (one for GIS and one for remote sensing). Previously, the specialization included both course streams.

Further this revision ensures student skillsets, as presented on their degree, will offer greater clarity. The term 'Geomatics' is often associated with surveying, so the change to reference 'remote sensing' is clearer.

GEOG371, GEOG387, GEOG471, and GEOG270 will be changed to the new subject code GDS371, GDS387, GDS471, and GDS270 upon SUC approval.

Related agenda proposals:

- CEC-Remote Sensing Specialization
- G-Remote Sensing Specialization

Consultations (Departmental)

Consultations with Planning regarding cross-listed courses occurred at a meeting held on Sept. 17, 2025. Planning expressed support and will be submitting a proposal to remove cross-list with GEOG 387.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty
Faculty of Environment

Undergraduate Credential Type
Specialization

Program/Plan Name
Remote Sensing Specialization

Admissions

Specialization is available for students in the following majors

H-Geography & Aviation

Admissions Entry Point
Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a Plan Modification Form.

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.

Course Requirements (units)

Required Courses

- 2.5Units to Complete
- Complete all of the following
    - Complete all the following:
        - GEOG371 - Advanced Remote Sensing Techniques (0.50)
        - GEOG387 - Spatial Databases (0.50)
        - GEOG471 - Remote Sensing Project (1.00)
    - Complete 1 of the following:
        - AVIA270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
        - GEOG270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
- Grand Total Units: 2.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

GEM-Remote Sensing Specialization - Remote Sensing Specialization

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Effective Date and Career

Career
Undergraduate,

Effective Term and Year
Fall 2026

Proposal Details

Proposal Type
New,

Academic Unit Approval
2025-09-24

Quality Assurance Designation
Major Modification Qad

Major Modification Categories
Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Recruitment Materials
Yes,

Co-operative System of Study and Requirements
Not Applicable,

Creating or Changing Invalid Combinations
No,

Change to Learning Outcomes
No,

Rationale and Background for New Program/Plan

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Related proposals:

- CEC-Remote Sensing Specialization
- GA-Remote Sensing Specialization

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General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty
Faculty of Environment

Undergraduate Credential Type
Specialization

Program/Plan Name
Remote Sensing Specialization

Admissions

Specialization is available for students in the following majors

H-Geography & Environmental Management, or JH-Geography & Environmental Management

Admissions Entry Point
Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a Plan Modification Form.

Requirements Information

Invalid Combinations
No,

Average Requirement
No,

Graduation Requirements

- Complete a total of 2.5 units.

Course Requirements (units)

Required Courses

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    - GEOG471 - Remote Sensing Project (1.00)
  - Complete 1 of the following:
    - AVIA270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
    - GEOG270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
- Grand Total Units: 2.5

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?
Yes,

Cross-Listings Options
All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

UG-ENV-Courses and Classes - Environment: Courses and Classes

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Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Change,

Rationale and Background

Students are increasingly attempting more than 2.5 units per term. While there are valid reasons for doing so including an attempt to make up a course in order to graduate on time, this has become increasingly common. In 24-25, just over 6% of full-time Environment students carried 3 or more units after the drop date, and this figure does not include those who purposely overload only to drop the sixth course they like least. This can result in poor allocation of TA resources, as these are assigned based on preliminary course enrollment. In some cases, overload has been approved for students in conditional standing. Moving the decision on overload to the Faculty Manager of Undergraduate Operations will allow advisors to be advocates for students, as negative decisions are made at a different level, introduce greater consistency into these decisions.

Effective Fall 2026, GEM will begin assigning unique grades to GEOG490A/B, after the completion of term, no longer using IP. Therefore, the section about IP grades needs to remove GEOG490A/B as an example and add A/B courses (ENVS403A/B) in which the same grade for both portions is assigned, and IP is used after the A portion is completed.

Related agenda proposals: N/A

General Regulation Information

Type of Regulation
Faculty-specific,

Faculty
Faculty of Environment

Regulation Page Name
Environment: Courses and Classes

Proposed

Description
Grading, academic unit load, repeating courses, courses with extra fees, taking grad courses

Existing

Description
Grading, academic load, repeating courses, courses with extra fees, taking grad courses

Regulation Details

Proposed

Regulation Details

Grading

Students should also familiarize themselves with grade definitions.

In Progress (IP) grade: May be assigned to the first half of a course that is listed as two courses normally taken over two terms (e.g., ENVS403A and ENVS403B). The grade indicates that the course is in progress and that when completed a final grade will be assigned to both the A and B halves of the course (normally the same grade). When the second (B) half of such a course is dropped, a Petition for Exception to Academic Regulations must be submitted to have the first (A) half dropped.

Audit (AUD) grade: Students may request to register for audit status in a course if the faculty administering the course allows audits. Students interested in an audit must consult with the course instructor at the beginning of the course to ascertain what conditions are attached to the granting of an AUD grade. Audits must be approved by the course instructor and the student's academic advisor during the published add period. Failure to satisfy the conditions of an audit will result in the course receiving a grade of WD (voluntary withdrawal).

Course Load

Normally no more than 2.5 units may be taken during a term. Plan academic advisors can approve up to 2.75 units. The Faculty Manager of Undergraduate Operations may approve an increase course load to a maximum of 3.25 units for an academic term if exceptional circumstances can be demonstrated. Students wishing to take a maximum of 3.5 units in a term must submit a Petition for Exception to Academic Regulations. Requests to complete more than 3.5 units in a term will not be considered.

Repeating Courses

Normally, special permission, beyond course requisites, is not required to repeat a failed course.

Students must submit a Petition for Exception to Academic Regulations to repeat a course they have already passed and for which they have achieved credit. If approval to repeat a passed course is granted, only one of the two attempts will count towards an academic credential(s).

All course attempts will be calculated in plan averages.

Undergraduate Students Taking Graduate Courses

In some instances, graduate courses may be counted towards an undergraduate degree in the Faculty of Environment. Students must speak with their academic advisor to approve enrolment in a graduate course. Students must achieve a minimum of 60.0% to pass a graduate course. Normally, graduate courses counted towards an undergraduate degree cannot be double counted to satisfy graduate degree requirements.

Existing

Regulation Details

Grading

Students should also familiarize themselves with grade definitions.

In Progress (IP) grade: May be assigned to the first half of a course that is listed as two courses normally taken over two terms (e.g., GEOG490A and GEOG490B). The grade indicates that the

course is in progress and that when completed a final grade will be assigned to both the A and B halves of the course (normally the same grade). When the second (B) half of such a course is dropped, a Petition for Exception to Academic Regulations must be submitted to have the first (A) half dropped.

Audit (AUD) grade: Students may request to register for audit status in a course if the faculty administering the course allows audits. Students interested in an audit must consult with the course instructor at the beginning of the course to ascertain what conditions are attached to the granting of an AUD grade. Audits must be approved by the course instructor and the student's academic advisor during the published add period. Failure to satisfy the conditions of an audit will result in the course receiving a grade of WD (voluntary withdrawal).

Academic Load

Normally no more than 2.5 units may be taken during a term. A student's academic plan advisor may approve a maximum of 3.25 academic units per academic term if exceptional circumstances can be demonstrated. Students wishing to take 3.5 or more units in a term must submit a Petition for Exception to Academic Regulations.

Repeating Courses

Normally, special permission, beyond course requisites, is not required to repeat a failed course.

Students must submit a Petition for Exception to Academic Regulations to repeat a course they have already passed and for which they have achieved credit. If approval to repeat a passed course is granted, only one of the two attempts will count towards an academic credential(s).

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In some instances, graduate courses may be counted towards an undergraduate degree in the Faculty of Environment. Students must speak with their academic advisor to approve enrolment in a graduate course. Students must achieve a minimum of 60.0% to pass a graduate course. Normally, graduate courses counted towards an undergraduate degree cannot be double counted to satisfy graduate degree requirements.

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Date 2026/01/19

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Meeting Information

Agenda Page TitleSUC - 2026-02 - Regular Agenda - Faculty of Mathematics

Career Level
Undergraduate,

Faculty/UnitMathematics

Date2026-02-04 **Time** **Location**

Summary

1. Major Program/Plan Modifications (Motion 1)

- **H-Data Science (BMath)**

Other Business

Course Proposals

Courses: Retire No proposals have been added.

Courses: New No proposals have been added.

Courses: Changes No proposals have been added.

Programs & Plans Proposals

Programs & Plans: Retire No proposals have been added.

Programs & Plans: Major Modifications

Code	Title	Type	Workflow Step
H-Data Science (BMath)	Data Science (Bachelor of Mathematics - Honours)	Programs	SUC Subcommittee, SUC Curricular Subcommittee