



Architectural Technologies Diploma

PLAR Candidate Guide

Prior Learning Assessment and Recognition (PLAR)

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Prior learning credit options at Saskatchewan Polytechnic

See [Get Credit for What you Know](#) for important information about all options to get credit for prior learning at Sask Polytech, including PLAR, transfer credit, Canadian Armed Forces credit, and equivalency credit.

How to navigate this document

This document contains links to other document sections or webpages. To return to where you were from another section in this document, press the *ALT* key and *left arrow* key at the same time. To return to this webpage from another webpage, close the other webpage or click back on the browser tab for this document.

Contents of this guide

This guide contains the following specific PLAR information and tools for this program

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- B. [PLAR eligibility and options](#)
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A. PLAR fees

Fees for PLAR challenges are set to cover our costs for consultation, assessment, and related administrative tasks. PLAR fees are non-refundable and non-transferrable.

The PLAR fees policy is subject to change for each new academic year. Please see the **Cost** section on the [PLAR webpage](#) for current fee information.

B. PLAR eligibility and options

To be eligible for PLAR for courses in this program, you must first apply for admission and be accepted into the program. You must also consult with the [PLAR contact person](#) and be approved for PLAR assessment.

Course prerequisites and corequisites

Some courses have one or more other courses that must be completed first (prerequisite) or at the same time (corequisite). See [course outlines](#) in this guide to identify any pre- or co-requisites for each course. Discuss with your [PLAR contact person](#) how to deal with courses with corequisites.

Block assessment

Some programs may assess a cluster of courses together in one block, which may save you time and effort. Ask the [PLAR contact person](#) whether there are any block assessment options in this program.

C. Dates when PLAR assessment is available

PLAR assessment for this program is available from Sept 1 to June 15 in each academic year.

All PLAR assessments must be completed by June 15 of each academic year.

D. Special directions for this program

1. **Review** the [PLAR process and FAQs](#) and the information in this guide.
2. **Self-rate** your learning for each course using the [Course Outlines](#) in this guide.
3. **Consult** with the [PLAR contact person](#) for PLAR approval. Be prepared to provide your resume, course self-ratings (see [section F](#)), and a partially completed [PLAR application](#). If you are approved for PLAR, the contact person will sign your PLAR application and explain next steps.
4. Apply for admission to the program. See [directions](#) for applying.
5. **Register** for PLAR at [Registration/Enrolment Services](#) once you have signed approval on your [PLAR Application Form](#). The PLAR fee will be added to your student account.
6. **Finalize** an assessment plan with your assigned assessor.
7. **Complete** assessment before your PLAR registration expires.

E. PLAR contact person

Contact one of the Program Heads below to arrange a consultation **after** you have read this guide and [general PLAR information](#) and rated yourself for each course (see next section). Consultation may be by phone, online, or in person. Be prepared to provide your resume, course self-ratings, and a partially completed [PLAR application](#). If agreement is reached to go ahead with PLAR, the contact person will sign approval on your PLAR application and explain the next steps. Admission to the program is required before you can register for PLAR.

Angela Deans, Program Head
Architectural Technologies
Saskatchewan Polytechnic | Moose Jaw Campus
Phone: 306-691-8402
Email: angela.deans@saskpolytech.ca

F. Self-rating course outlines

Clicking on a course code below opens a page where you can rate yourself on the knowledge and skills assessed for PLAR credit. For Arts & Sciences courses, clicking on the course code opens another PLAR guide. The [PLAR contact person](#) for this program will refer you to another person to discuss PLAR for courses delivered by Arts & Sciences or another program/department.

COURSE CODE	COURSE NAME	Delivered by another department/program
Semester 1		
CNST 122	Building Construction: Wood Frame Residential 1	
CODE 100	Building Code: Part 9 Applications 1	
DRFT 109	Architectural Drafting: Fundamental Techniques	
DRFT 110	Architectural Drafting: Computer-Aided Techniques 1	
DSGN 121	Design Studio: Fundamentals	
MATH 115	Calculus for Architectural Technologies	Arts & Sciences
MGMT 228	Management Principles	
TCOM 102	Workplace Communication	Arts & Sciences
Semester 2		
ADMN 108	Contract Administration: Ethics Law and Documents	
ADMN 109	Contract Administration: Estimating	
CNST 221	Building Construction: Residential Construction 2	
CODE 101	Building Code: Part 9 Applications 2	

COURSE CODE	COURSE NAME	Delivered by another department/program
DRFT 111	Architectural Drafting: Computer-Aided Techniques 2	
DRFT 220	Architectural Drafting: Residential Working Drawings 1	
DSGN 231	Design Studio: Residential	
SFTY 129	Safety Awareness	
STAT 200	Statistics for Technology	Arts & Sciences
TCOM 103	Technical Communication	Arts & Sciences
Co-Operative Work Term 1		
COOP 101	Co-operative Work Term	
Semester 3		
ADMN 211	Contract Administration: Construction Contracts and Regulations	
ADMN 212	Contract Administration: Cost Management and Accounting	
BLDG 220	Building Systems: Residential 1	
CNST 222	Building Construction: Commercial Fundamentals	
CODE 200	Building Code: Part 3 Applications 1	
DRFT 224	Architectural Drafting: Residential Working Drawings 2	
DSGN 232	Design Studio: Institutional	
PHYS 228	Physics: Light, Heat and Sound	Arts & sciences
Co-Operative Work Term 2		
COOP 201	Co-operative Work Term	
Semester 4 Building Sciences		
BLDG 222	Building Systems: Building Science	
CNST 232	Building Construction: Commercial Buildings 1	
CODE 201	Building Code: Part 3 Applications 2	
HIST 221	Architectural History: Context for Saskatchewan	

COURSE CODE	COURSE NAME	Delivered by another department/program
PHYS 227	Physics: Statics and Strength of Materials	Arts & Sciences
RENO 220	Architectural Drafting: Renovation Working Drawings	
SRVY 228	Surveying: Introduction to Survey and Building Layout	
Semester 4 Interior Design		
CNST 233	Building Construction: Commercial Interiors	
CODE 201	Building Code: Part 3 Applications 2	
DSGN 234	Design Studio: Commercial Mixed Occupancy 1	
HIST 221	Architectural History: Context for Saskatchewan	
PHYS 227	Physics: Statics and Strength of Materials	Arts & Sciences
RENO 222	Design Studio: Commercial Adaptive Re-use	
SRVY 228	Surveying: Introduction to Survey and Building Layout	
Co-Operative Work Term 3		
COOP 301	Co-operative Work Term	
Semester 5 Building Sciences		
ADMN 258	Project Management and Estimating	
CNST 224	Building Construction: Commercial Buildings 2	
CODE 300	Building Code: Part 3 Applications 3	
DRFT 233	Architectural Drafting: Commercial Working Drawings	
PROJ 228	Applied Research: Capstone Project	
BLDG 302	Building Construction: High-Performance Building Enclosures	
BLDG 301	Building Systems: Commercial	
Semester 5 Interior Design		
ADMN 258	Project Management and Estimating	
CNST 234	Building Construction: Design Build Project	

COURSE CODE	COURSE NAME	Delivered by another department/program
CODE 300	Building Code: Part 3 Applications 3	
DRFT 234	Architectural Drafting: Commercial Working Drawings for Interior Design	
DSGN 235	Design Studio: Commercial Mixed Occupancy 2	
PROJ 228	Applied Research: Capstone Project	

CNST 122 - Building Construction: Wood Frame Residential 1

You will learn the fundamentals of light wood frame construction designed using Part 9 of the National Building Code of Canada. You will analyze the structural requirements of bungalows and bi-levels. You will also learn how to draw construction details using architectural drafting conventions.

Credit unit(s): 4.0
Prerequisites: none
Corequisites: CODE 100
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Analyze foundation requirements for concrete basements with an attached garage.			
2. Calculate structural requirement for wood frame floors in bungalows, including stair openings.			
3. Analyze the structural requirements for cantilevered and sunken floors.			
4. Analyze foundation requirements for bi-levels.			
5. Analyze structural requirements for wood frame floors in bi-levels, including stair openings.			
6. Examine structural requirements for wood frame walls in bungalows and bi-levels.			
7. Sketch critical connection details for structural systems in bungalows and bi-levels.			
8. Sketch building sections through bungalows and bi-levels.			
9. Use manual drafting techniques.			
10. Draw wall sections for bungalows and bi-levels using architectural drafting conventions.			
11. Draw critical connection details using architectural drafting conventions.			
12. Sketch construction details indicating air, vapour, and thermal control layers.			

CODE 100 - Building Code: Part 9 Applications 1

You will learn to interpret sections of Part 9 of the National Building Code of Canada (NBC). You will discuss typical construction materials and methods.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: CNST 122
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Explain how the National Building Code of Canada (NBC) is used in Saskatchewan.			
2. Discuss how the NBC influences residential construction methods and materials.			
3. Interpret NBC Part 9 requirements for below- and at-grade construction systems.			
4. Interpret NBC Part 9 requirements for floor systems.			
5. Interpret NBC Part 9 requirements for above-grade wall systems.			
6. Interpret NBC Part 9 requirements for finishes and fenestrations.			
7. Interpret NBC requirements for heat transfer, air leakage, and condensation control in Part 9 buildings.			

DRFT 109 - Architectural Drafting: Fundamental Techniques

You will study the fundamentals of architectural drafting using manual techniques. You will be introduced to architectural drafting conventions while creating multi-view and single-view drawings.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Explain the role of design drawings in architectural problem solving.			
2. Discuss projection systems and pictorial effects.			
3. Use manual drafting equipment and techniques.			
4. Use architectural drafting conventions.			
5. Examine relationships between three dimensional objects and representational design drawings.			
6. Construct orthographic projections.			
7. Construct shades and shadows on multi-view and single-view drawings.			
8. Construct perspective drawings.			

DRFT 110 - Architectural Drafting: Computer-Aided Techniques 1

You will acquire fundamental skills required to operate AutoCAD. The course focuses on architectural applications of the software.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1.	Use basic AutoCAD functions.			
2.	Use intermediate AutoCAD functions.			
3.	Use advanced AutoCAD functions to create efficient workflows for architectural drafting.			
4.	Draw residential construction details using AutoCAD.			
5.	Draw simple plans and elevations using AutoCAD.			
6.	Use AutoCAD to print multi-scale architectural drawings.			

DSGN 121 - Design Studio: Fundamentals

You will learn fundamental graphic skills and graphic design concepts. You will learn how to apply these skills to graphic presentations and three-dimensional objects.

Credit unit(s): 4.0
Prerequisites: none
Corequisites: none
Equivalent course(s): GRPH 121

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Identify the elements and principles of design.			
2. Apply elements of design.			
3. Apply principles of design.			
4. Use manual techniques to demonstrate design fundamentals.			
5. Use software to demonstrate design fundamentals.			
6. Prepare theory plates that demonstrate the rules of design.			
7. Revise theory plates in response to criticism.			
8. Defend revised theory plates.			
9. Propose a three-dimensional design solution that demonstrates a design concept using the rules of design.			
10. Create a three-dimensional model that communicates a design concept.			
11. Reflect on the design success of three-dimensional models.			
12. Sketch small objects using watercolour, marker, and pencil crayon.			

MATH 115 - Calculus for Architectural Technologies

You will gain knowledge of calculus topics applicable to architectural technology. You will study limits, differentiation, and its applications, graphing with derivatives, and integration and its applications. This course is intended to further build problem solving and critical thinking skills, and to demonstrate the importance of calculus in engineering practice.

Credit unit(s): 4.0
Prerequisites: none
Corequisites: none
Equivalent course(s): CALC 281 MAT 111 MAT 220 MAT 222 MAT 246

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Apply powers and radicals in the study of technical problems.			
2. Examine functions analytically and graphically.			
3. Examine the concept of a derivative through the study of slopes and limits of functions.			
4. Calculate derivatives of algebraic functions.			
5. Use first and second derivatives to graph functions.			
6. Analyze technical problems using differentiation.			
7. Examine the concept of an integral through the study of anti-derivatives and the Fundamental Theorem of Calculus.			
8. Calculate integrals of algebraic functions.			
9. Analyze technical problems using integration.			

MGMT 228 - Management Principles

You will study human behaviour in organizations and develop the skills needed to deal with people at work. The course content includes individual behaviour, values, interpersonal relationships and communications, groups and team dynamics, organizational culture, leadership, and change. All topics are dealt with in the context of diverse formal organizations.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe organizational behaviour.			
2. Explain how our perceptions, personalities, emotions, and values shape our behaviour.			
3. Apply various motivational models to improve performance.			
4. Develop effective teambuilding skills.			
5. Explain how power and organizational politics relate to performance.			
6. Explain conflict management and organizational culture.			
7. Describe the appropriate leadership style in a situation using leadership theory.			
8. Explain the benefits and the challenges faced with group decision making.			
9. Explain organizational change and strategies to overcome resistance to change.			
10. Demonstrate the ethics expected of architectural technologists.			

TCOM 102 - Workplace Communication

You will examine the employability skills required in the workplace. You will discuss the communication process, and practice effective interpersonal communication techniques and conflict resolution. You will use workplace writing and job search skills.

Credit unit(s): 3.0

Prerequisites: none

Corequisites: none

Equivalent course(s): COM 160 COMM 191 JOBS 190 JOBS 288 JOBS 290 TCOM 102CE TCOM 120
TCOM 140 TMGT 180

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Examine fundamentals of workplace communication.			
2. Discuss conflict resolution techniques.			
3. Apply job-related interpersonal and oral communication strategies.			
4. Apply workplace writing skills.			
5. Use job search skills.			

ADMN 108 - Contract Administration: Ethics, Law, and Documents

You will be introduced to the roles and responsibilities of people involved in construction projects, considering professional ethics, liability, safety, and contractual responsibility. You will explore the basic principles of construction documentation as defined by Construction Specifications Canada Principles of Construction Documentation.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the importance of ethics and liability in construction.			
2. Examine the treaty relationship in relation to land ownership and stewardship.			
3. Describe the construction process and the principles of construction documentation.			
4. Demonstrate how to assemble a basic construction specification.			
5. Discuss contract types and applicable codes, and standards.			
6. Discuss the documents used in contract administration.			

ADMN 109 - Contract Administration: Estimating

You will learn the fundamental procedures used to estimate costs of construction. You will learn the skills required to prepare an estimate.

Credit unit(s): 1.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

Use a checkmark (✓) to rate yourself as follows for each learning outcome Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.	Competent	Learning	None
1. Analyze residential drawings to determine parameters of the construction project.			
2. Compose data required to determine cost of labour, materials, equipment, and overhead.			
3. Use software to prepare an estimate for bidding.			

CNST 221 - Building Construction: Residential Construction 2

You will expand your knowledge of light wood frame construction designed using Part 9 of the National Building Code of Canada. You will analyze the structural requirements of two-storey houses and develop the skills necessary to design and detail related construction assemblies.

Credit unit(s): 4.0
Prerequisites: CNST 122
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Analyze roof requirements for bungalows and two-storeys.			
2. Analyze stair requirements for bungalows, bi-levels and two-storeys.			
3. Analyze load transference in two-storey residences.			
4. Design two-storey structures using the National Building Code of Canada (NBC) Part 9 to select structural elements.			
5. Use manufacturer’s literature to establish requirements for using engineered structural components.			
6. Prepare construction details for roof assemblies.			
7. Prepare construction details for stairs.			
8. Prepare construction details for interior doors and doorways.			
9. Prepare construction details for exterior doors.			
10. Prepare construction details for exterior windows.			
11. Prepare constructions details that illustrate advanced wall construction methods.			

CODE 101 - Building Code: Part 9 Applications 2

You will expand your ability to interpret sections of Part 9 of the National Building Code of Canada (NBC). You will gain proficiency in applying code concepts that impact the design and construction of houses.

Credit unit(s): 2.0
Prerequisites: CODE 100
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Interpret NBC Part 9 requirements for roof systems.			
2. Interpret NBC Part 9 requirements for stairs, ramps, handrails, and guards in houses.			
3. Interpret NBC Part 9 requirements for means of egress in houses.			
4. Interpret NBC Part 9 requirements for fire protection in houses.			
5. Interpret requirements for houses with secondary suites.			
6. Interpret NBC Part 9 requirements for spatial separation restrictions between houses.			
7. Explain the options for meeting NBC Part 9 energy efficiency requirements in Saskatchewan.			

DRFT 111 - Architectural Drafting: Computer-Aided Techniques 2

You will acquire fundamental skills required to operate Autodesk Revit. You will create a partial set of working drawings for a single-family residence using fundamental procedures in Revit. This course serves as an introduction to Building Information Modelling (BIM) techniques.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss Building Information Modelling (BIM) techniques.			
2. Set up Revit drawings for use in architectural applications.			
3. Create a building model using Revit.			
4. Create architectural drawings using a Revit model.			

DRFT 220 - Architectural Drafting: Residential Working Drawings 1

You will learn to produce architectural drawings for single-storey residential construction projects. Using AutoCAD, you will create construction drawings based on the typical requirements for residential permit sets.

Credit unit(s): 4.0
Prerequisites: CNST 122, CODE 101
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Apply architectural drafting conventions to residential set of working drawings using AutoCAD.			
2. Apply annotations, including dimensions and other critical information.			
3. Analyze a preliminary design of a house to establish horizontal and vertical relationships.			
4. Analyze structural requirements for a single-storey house.			
5. Create a main floor plan.			
6. Create a basement plan.			
7. Create a building section and a wall section.			
8. Create a building elevations.			
9. Create truss and floor layouts.			
10. Create site and roof plans.			
11. Revise working drawings to address deficiencies.			
12. Assess working drawings for continuity and coordination.			

DSGN 231 - Design Studio: Residential

You will learn the fundamentals of the design process. You will use that process to design a house and present your design in a professional format.

Credit unit(s): 4.0
Prerequisites: DSGN 121, DRFT 110
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the design process.			
2. Implement strategies for collecting design information.			
3. Discuss house styles that influence house design.			
4. Identify technical parameters that will influence a design.			
5. Apply elements and principles to house design.			
6. Use SketchUp to create three-dimensional representations.			
7. Formulate a design programme.			
8. Evaluate interactions between activity zones and circulation spaces.			
9. Prepare a preliminary design of a house.			
10. Propose materials and finishes that meet programme criteria.			
11. Prepare finalized presentation drawings, including renderings.			
12. Sketch residential items using watercolour, marker and pencil crayon.			

SFTY 129 - Safety Awareness

You will acquire the knowledge and theory needed to recognize and protect yourself from unsafe conditions on the job site. You will learn how to apply Occupational Health and Safety regulations. You will focus on the theory needed to identify and describe personal protective equipment, fall protection, and work environment hazards.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): SFTY 101, SAFE 107

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Identify Occupational Health and Safety legislation.			
2. Select personal protective equipment.			
3. Identify fall protection.			
4. Identify unsafe working environments.			
5. Practice hazard identification and control.			
6. Identify Workplace Hazardous Materials Information System (WHMIS) 2015.			

STAT 200 - Statistics for Technology

You will gain knowledge of statistical concepts and techniques applicable to technologies. You will study descriptive statistics, measures of central tendency and dispersion, basic probability, the Central Limit Theorem, and linear regression. This course is intended to build problem solving and critical thinking skills, and to demonstrate the importance of statistics in professional practices.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Define statistical terminology and procedures.			
2. Apply measures of central tendency to technical problems.			
3. Apply measures of dispersion and the Central Limit Theorem to descriptive statistics.			
4. Examine basic probability.			
5. Analyze paired statistical data using simple linear regression.			

TCOM 103 - Technical Communication

You will use research skills to find technical information and cite it correctly. You will conduct effective meetings and produce supporting documents. As well, you will discuss technical report purposes and formats, write short technical reports and present technical information.

Credit unit(s): 3.0
Prerequisites: TCOM 102, COM 170
Corequisites: none
Equivalent course(s): COMM 181 COMM 190 TCOM 103CE TCOM 106 TCOM 123 TCOM 141 TCOM 190

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Conduct research for a technical report.			
2. Use correct grammar and technical style.			
3. Create technical reports.			
4. Conduct meetings.			
5. Present technical information.			

ADMN 211 - Contract Administration: Construction Contracts and Regulations

You will learn the fundamentals of construction contract administration. You will learn about the documents and procedures used to manage construction projects as defined by Construction Specifications Canada Construction Contract Administration.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Describe the construction process and typical documents.			
2. Discuss field services and initial project procedures.			
3. Describe site authority and document interpretation.			
4. Describe the execution of work and site activities.			
5. Discuss communication, project submittals, changes in the work, and payment procedures.			
6. Discuss warranties, close-out, and commissioning.			

ADMN 212 - Contract Administration: Cost Management and Accounting

You will learn the fundamental skills required to control costs within a construction project. You will also learn the basic principles of construction accounting.

Credit unit(s): 1.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss life-cycle costing and cost control.			
2. Prepare a preliminary budget for a building.			
3. Use basic construction accounting methods.			

BLDG 220 - Building Systems: Residential 1

Your studies will focus on the integration of building engineering systems commonly used in residential buildings. You will be introduced to mechanical, electrical, and plumbing (MEP) design principles from the perspective of architectural coordination.

Credit unit(s): 4.0
Prerequisites: CNST 221
Corequisites: none
Equivalent course(s): BUSY 220

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss sustainable strategies in residential buildings.			
2. Apply requirements of National Building Code (NBC) 9.36.			
3. Summarize lighting design principles for residential buildings.			
4. Examine typical electrical systems used in residential buildings.			
5. Examine typical mechanical systems used in residential buildings.			
6. Examine typical plumbing systems used in residential buildings.			
7. Sketch schematic mechanical, electrical, and plumbing layouts for residential architectural coordination.			
8. Use psychrometric data.			
9. Calculate total building heat flow.			

CNST 222 - Building Construction: Commercial Fundamentals

You will be introduced to materials and methods used in single-storey commercial construction. You will develop the skills necessary to design and detail basic commercial construction assemblies.

Credit unit(s): 4.0
Prerequisites: CNST 221
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Construct a framing model based on National Building Code (NBC) Part 9 requirements.			
2. Differentiate between residential and commercial construction approaches.			
3. Discuss the basic properties of structural wood, steel, and concrete.			
4. Discuss common foundation systems.			
5. Discuss common load-bearing wall options.			
6. Discuss common low-sloped roof options.			
7. Discuss common sloped roof options.			
8. Explain thermal, vapour, air, and moisture control needs of assemblies and connections.			
9. Prepare construction details for foundation systems.			
10. Prepare construction details for load-bearing wall systems.			
11. Prepare construction details for roof systems.			
12. Prepare construction details for transitions between assembly systems.			

CODE 200 - Building Code: Part 3 Applications 1

You will evaluate buildings which are permitted to be designed and constructed using Part 9 of the National Building Code of Canada (NBC). Your analysis of buildings will include classifications, fire protection requirements and egress requirements.

Credit unit(s): 3.0
Prerequisites: CNST 221, CODE 101
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Evaluate buildings to establish Part 3 or Part 9 applicability using the National Building Code of Canada (NBC).			
2. Interpret means of egress in a Part 9 building.			
3. Interpret building fire protection requirements in a Part 9 building.			
4. Interpret fire protection requirements for rated assemblies and fire separations in a Part 9 building.			
5. Interpret requirements for spatial separations for Part 9 buildings, other than houses.			
6. Interpret requirements for fire alarm and detection systems, and firefighting requirements in a Part 9 building.			
7. Complete a building code analysis for a Part 9 building.			

DRFT 224 - Architectural Drafting: Residential Working Drawings 2

You will produce residential working drawings using Autodesk Revit, based on preliminary design data, manufacturers' literature and the National Building Code of Canada (NBC). Your focus will be on a custom-designed, two-storey house.

Credit unit(s): 4.0
Prerequisites: CNST 221, CODE 101, DRFT 220, DRFT 111
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Propose a custom two-storey house based on a re-design of preliminary sketches.			
2. Assess structural requirements.			
3. Create floor plans.			
4. Create building and wall sections.			
5. Create exterior elevations.			
6. Create construction details.			
7. Create interior elevations and details, including millwork.			
8. Create architectural schedules.			
9. Create site plans.			
10. Prepare working drawings using commercial drafting conventions and Autodesk Revit.			
11. Revise working drawings to address deficiencies.			
12. Assess working drawings for continuity and coordination.			

DSGN 232 - Design Studio: Institutional

You While exploring other cultures, you will use the design process to plan and design an institutional project that meets specialized client needs. You will present and reflect on your design in a professional setting.

Credit unit(s): 4.0
Prerequisites: DSGN 231, DRFT 220
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Create an Indigenous design proposal in collaboration with stakeholders.			
2. Acknowledge the value of different cultures.			
3. Formulate a design concept and programme.			
4. Propose preliminary floor plans.			
5. Propose pictorial views using digital rendering techniques.			
6. Propose materials and finishes that meet programme criteria.			
7. Propose furniture, furnishings, and equipment (FF&E) that meet programme criteria.			
8. Prepare finalized presentation drawings based on feedback.			
9. Present a design in a professional setting.			
10. Evaluate proposed institutional designs based on the design programme.			
11. Sketch the human form using watercolour, marker and pencil crayon.			

PHYS 228 - Physics: Light, Heat and Sound

Your studies will focus on the fundamental principles of dynamics, light and illumination, electrical generation and distribution, heat production and transfer, fluid flow, vibration, waves and sound. The basic principles of physics in each of these areas will be studied in the context of building systems applications.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Solve problems involving motion, force, work, energy, and power.			
2. Solve problems involving light, illumination, reflection, and refraction.			
3. Solve technical problems requiring the application of fundamental electrical theory.			
4. Solve heat measurement and transfer problems.			
5. Solve problems involving the physical relationships in elementary hydrostatics and fluid dynamics.			
6. Solve problems involving vibration, waves and sound.			

COOP 101 - Co-operative Work Term

Your co-operative education term will provide you with the opportunity to consolidate theoretical and practical concepts learned in the classroom and gain valuable experience in a work setting.

Credit unit(s): 0.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Develop personal employment search skills.			
2. Communicate in the workplace.			
3. Work as a member of the team.			
4. Demonstrate effective work habits.			
5. Become familiar with safe work practices.			
6. Develop personal management skills.			
7. Identify roles and responsibilities of personnel in the workplace.			
8. Assimilate learned theories and concepts in a workplace setting.			
9. Demonstrate essential skills.			

COOP 201 - Co-operative Work Term

Your second co-operative education term will build on the experience gained during your first work placement and provide you with additional opportunities to develop skills and techniques related to your field of studies in a real work setting.

Credit unit(s): 0.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Participate in a personal employment search.			
2. Communicate effectively in the workplace.			
3. Contribute as a member of the team.			
4. Demonstrate effective work habits.			
5. Demonstrate safe work practices.			
6. Display personal management skills.			
7. Identify roles and responsibilities of personnel in the workplace.			
8. Apply learned skills and techniques in the workplace.			
9. Apply essential skills in the workplace.			

COOP 301 - Co-operative Work Term

Your third co-operative education work term will round out the work term experience by adding related work knowledge through the application of theories and practices relevant to your field of studies.

Credit unit(s): 0.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Demonstrate personal employment search skills.			
2. Display effective communication skills.			
3. Work as a member of the team.			
4. Apply effective work habits.			
5. Perform safe work practices.			
6. Master personal management skills.			
7. Understand roles and responsibilities of personnel in the workplace.			
8. Apply relevant theories and techniques.			
9. Perform effectively in the workplace.			

BLDG 222 - Building Systems: Building Science

You will examine the effects of heat, vapour, and airflow in building enclosures. Using building science principles, you will consider ways to design successful building assemblies and connections. You will also investigate the impact of energy retrofits on aging buildings.

Credit unit(s): 3.0
Prerequisites: BLDG 220, CNST 222
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Examine properties of materials, considering heat, vapour, and air control.			
2. Analyze heat, vapour, air, and soil gas control in foundations.			
3. Analyze heat, vapour, and air control in wall assemblies.			
4. Analyze heat, vapour, and air control in roof assemblies.			
5. Examine the role of weather resistive barriers and water shedding surfaces in building assemblies.			
6. Examine the design of connection details.			
7. Appraise the effect of building envelope retrofits when applied to aging buildings.			

CNST 232 - Building Construction: Commercial Buildings 1

You will be introduced to materials and methods used in low-rise commercial construction. You will develop the skills necessary to design and detail commercial construction assemblies that integrate structural frames.

Credit unit(s): 4.0
Prerequisites: CNST 222
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Differentiate between load-bearing wall and structural frame design approaches.			
2. Discuss heavy timber frame systems referencing the Wood Design Manual.			
3. Discuss steel frame systems referencing the Handbook of Steel Construction.			
4. Prepare construction details for in-fill wall systems.			
5. Prepare construction details for floor systems.			
6. Prepare construction details for roof systems.			
7. Prepare construction details for transitions between assembly systems.			
8. Prepare construction details for masonry openings.			
9. Design positive drainage for roofs.			

CODE 201 - Building Code: Part 3 Applications 2

You will evaluate non-complex buildings using Part 3 of the National Building Code of Canada (NBC). Your analysis of buildings will include classifications, fire protection requirements and egress requirements. You will also interpret health and accessibility requirements.

Credit unit(s): 2.0
Prerequisites: CODE 200
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Classify buildings to determine construction requirements using the National Building Code of Canada (NBC).			
2. Interpret requirements for fire separations and firewalls.			
3. Interpret fire protection requirements for rated assemblies and fire separations.			
4. Interpret requirements for safety within floor areas.			
5. Interpret requirements for exits.			
6. Interpret building health and accessibility requirement.			

HIST 221 - Architectural History: Context for Saskatchewan

You will discuss the historical shaping of Saskatchewan's built environment, considering vernacular approaches and European influences. You will also consider the heritage significance of Saskatchewan buildings.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): HIST 220

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the geographic and cultural influences on vernacular architecture around the globe.			
2. Discuss the geographic and cultural influences on Indigenous Peoples' housing in Canada.			
3. Discuss significant architecture from antiquity through to the end of the Roman empire.			
4. Discuss significant architecture from the fall of Rome through the medieval period.			
5. Discuss significant architecture from the early modern period.			
6. Discuss significant architecture from the long 19th century.			
7. Discuss significant architecture from the modern and postmodern periods.			
8. Discuss the influence of historic styles on Saskatchewan architecture.			
9. Examine Saskatchewan buildings for heritage significance.			

PHYS 227 - Physics: Statics and Strength of Materials

You will investigate the physical properties of structural materials, including statics, moment of inertia and strength of materials. You will observe how engineers use these properties to select beams and columns from a table.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): SCAL 122

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Use vectors and free-body-diagrams to resolve concurrent force systems.			
2. Solve equilibrium problems involving trusses.			
3. Solve load tracing problems in frame buildings.			
4. Compare moment of inertia of different composite areas.			
5. Analyze stress and strain in materials.			
6. Examine tables used by engineers to select structural members.			

RENO 220 - Architectural Drafting: Renovation Working Drawings

As part of a team, you will create architectural drawings for a renovation and addition using Autodesk Revit. You will also study construction systems of the past to inform your design and drafting decisions.

Credit unit(s): 4.0
Prerequisites: DRFT 224, CODE 200
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Collaborate with team members to manage projects.			
2. Compare past construction systems to those used in the present.			
3. Analyze applicable codes and standards.			
4. Prepare as-built drawings.			
5. Propose a preliminary design for a house addition and renovation.			
6. Prepare demolition drawings.			
7. Create floor plans for proposed renovation.			
8. Create building sections for proposed renovation.			
9. Create interior and exterior elevations for proposed renovation.			
10. Create construction details for the affected area.			
11. Prepare working drawings using renovation drafting conventions.			

SRVY 228 - Surveying: Introduction to Survey and Building Layout

You will receive an introduction to the basics of surveying. The course content includes horizontal measurements, levelling, angle and direction measurement, computations.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): SRVY 120

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss principles of surveying.			
2. Discuss fundamentals of horizontal and vertical measurement.			
3. Perform typical surveying calculations.			
4. Demonstrate use of surveying equipment.			
5. Create a site plan for architectural working drawings.			
6. Lay out a building on a construction site.			

CNST 233 - Building Construction: Commercial Interiors

Your studies will focus on materials and construction methods used in commercial interior design. You will develop the skills necessary to design and detail interior construction assemblies. North American Architectural Woodwork Standards (NAAWS) will be examined as part of your studies.

Credit unit(s): 3.0
Prerequisites: CNST 222
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Use technical criteria to select interior construction materials and finishes.			
2. Examine typical construction methods used for interior assemblies.			
3. Design construction details for partitions.			
4. Design construction details for floors.			
5. Design construction details for ceilings.			
6. Design construction details for interior openings.			
7. Examine North American Architectural Woodwork Standards (NAAWS).			
8. Design construction details for millwork and furniture pieces.			
9. Design transitions between assembly systems.			

CODE 201 - Building Code: Part 3 Applications 2

You will evaluate non-complex buildings using Part 3 of the National Building Code of Canada (NBC). Your analysis of buildings will include classifications, fire protection requirements and egress requirements. You will also interpret health and accessibility requirements.

Credit unit(s): 2.0
Prerequisites: CODE 200
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Classify buildings to determine construction requirements using the National Building Code of Canada (NBC).			
2. Interpret requirements for fire separations and firewalls.			
3. Interpret fire protection requirements for rated assemblies and fire separations.			
4. Interpret requirements for safety within floor areas.			
5. Interpret requirements for exits.			
6. Interpret building health and accessibility requirement.			

DSGN 234 - Design Studio: Commercial Mixed Occupancy 1

You will develop the programme and concept for a commercial mixed-occupancy interior using a research-based approach. You will also visually communicate design ideas while advancing your presentation skills. You will use manual techniques and digital imaging software to enhance presentations, create graphic layouts and exploit multiple types of media.

Credit unit(s): 4.0
Prerequisites: DRFT 224, DSGN 232, CODE 200
Corequisites: CODE 201
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Formulate a design programme for a tenant improvement to an existing building using a research-based approach.			
2. Analyze functional relationships between activity zones.			
3. Prepare a code review for a tenant improvement.			
4. Propose preliminary floor plans views.			
5. Prepare a unified concept proposal.			
6. Demonstrate applications of digital rendering software and manual rendering techniques.			
7. Create a three-dimensional design.			
8. Defend design decisions.			
9. Revise a preliminary proposal based on feedback.			
10. Produce a professional portfolio.			
11. Sketch elements of architecturally significant buildings using watercolour, marker and pencil crayon.			

HIST 221 - Architectural History: Context for Saskatchewan

You will discuss the historical shaping of Saskatchewan's built environment, considering vernacular approaches and European influences. You will also consider the heritage significance of Saskatchewan buildings.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): HIST 220

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the geographic and cultural influences on vernacular architecture around the globe.			
2. Discuss the geographic and cultural influences on Indigenous Peoples' housing in Canada.			
3. Discuss significant architecture from antiquity through to the end of the Roman empire.			
4. Discuss significant architecture from the fall of Rome through the medieval period.			
5. Discuss significant architecture from the early modern period.			
6. Discuss significant architecture from the long 19th century.			
7. Discuss significant architecture from the modern and postmodern periods.			
8. Discuss the influence of historic styles on Saskatchewan architecture.			
9. Examine Saskatchewan buildings for heritage significance.			

PHYS 227 - Physics: Statics and Strength of Materials

You will investigate the physical properties of structural materials, including statics, moment of inertia and strength of materials. You will observe how engineers use these properties to select beams and columns from a table.

Credit unit(s): 3.0
Prerequisites: SCAL 122
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Use vectors and free-body-diagrams to resolve concurrent force systems.			
2. Solve equilibrium problems involving trusses.			
3. Solve load tracing problems in frame buildings.			
4. Compare moment of inertia of different composite areas.			
5. Analyze stress and strain in materials.			
6. Examine tables used by engineers to select structural members.			

RENO 222 - Design Studio: Commercial Adaptive Re-use

As part of a team, you will create architectural drawings to adapt an existing house into a commercial space. You will also study construction systems of the past to inform your design and drafting decisions.

Credit unit(s): 4.0
Prerequisites: DRFT 224, CODE 200
Corequisites: none
Equivalent course(s): DSGN 233

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Collaborate with team members to manage projects.			
2. Compare past construction systems to those used in the present.			
3. Create a model of an existing house with proposed renovation using Autodesk Revit.			
4. Prepare as-found drawings.			
5. Propose a preliminary design for a commercial adaptive reuse project.			
6. Prepare a building code analysis.			
7. Create demolition drawings.			
8. Create floor plans.			
9. Create interior elevations.			
10. Create interior construction details.			
11. Prepare working drawings using renovation drafting conventions and leveraging Revit phasing techniques.			
12. Assess working drawings for continuity and coordination.			

SRVY 228 - Surveying: Introduction to Survey and Building Layout

You will receive an introduction to the basics of surveying. The course content includes horizontal measurements, levelling, angle and direction measurement, computations.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): SRVY 120

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss principles of surveying.			
2. Discuss fundamentals of horizontal and vertical measurement.			
3. Perform typical surveying calculations.			
4. Demonstrate use of surveying equipment.			
5. Create a site plan for architectural working drawings.			
6. Lay out a building on a construction site.			

ADMN 258 - Project Management and Estimating

You will be introduced to processes, guidelines, and best practices used in project management. You will learn and practice effective project management skills through real-world activities, focusing on project outcomes in addition to deliverables. You will use tools, techniques, and software commonly used for project management. The course focuses on all aspects of a construction project from initiation through project completion and reflects a range of development approaches.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the concept of project.			
2. Explain project life cycles.			
3. Use software to document project components.			
4. Demonstrate an understanding of successful stakeholder management.			
5. Use project management tools to control scope.			
6. Use project management tools to control schedule.			
7. Use project management tools to control budget.			
8. Use project management tools to control risk.			

CNST 224 - Building Construction: Commercial Buildings 2

You will be introduced to materials and methods used in multi-storey commercial construction. You will develop the skills necessary to design and detail commercial construction assemblies to withstand the stresses of building movement.

Credit unit(s): 4.0
Prerequisites: CNST 232
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Examine steel frame systems.			
2. Examine concrete frame systems.			
3. Examine common materials used to enclose structural frames.			
4. Examine the effect of structural materials on building design.			
5. Examine the relationship between building mechanical systems and structural elements.			
6. Use technical criteria to select construction materials.			
7. Prepare construction details for exterior doors and exterior windows.			
8. Prepare construction details for partitions.			
9. Prepare construction details for differential movement.			
10. Prepare construction details for air-barrier longevity.			
11. Prepare construction details for transitions between assembly systems.			

CODE 300 - Building Code: Part 3 Applications 3

You will continue to evaluate buildings using Part 3 of the National Building Code of Canada (NBC), exploring more complex buildings than in prerequisite courses. Your analysis of complex buildings will include classifications, fire protection requirements and egress requirements as well as requirements for firefighting, fire alarm systems and spatial separations. You will also discuss other parts of the code that impact architectural decision-making.

Credit unit(s): 3.0
Prerequisites: CODE 201
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Classify buildings to determine construction requirements using the National Building Code of Canada (NBC).			
2. Interpret requirements for fire separations and firewalls.			
3. Interpret fire protection requirements for rated assemblies and fire separations.			
4. Interpret requirements for safety within floor areas.			
5. Interpret requirements for exits.			
6. Interpret spatial separation requirements.			
7. Interpret requirements for vertical transportation, service facilities.			
8. Discuss the roles and responsibilities associated with NBC Parts 4 through 8.			
9. Interpret requirements for fire alarm systems, provisions for firefighting, and emergency systems.			

DRFT 233 - Architectural Drafting: Commercial Working Drawings

You will produce a partial set of working drawings for a commercial building using Autodesk Revit. Your drawings will be based on preliminary design data, manufacturers' literature, and the National Building Code of Canada (NBC).

Credit unit(s): 4.0
Prerequisites: CNST 232, CODE 201
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Propose a commercial building based on preliminary sketches.			
2. Create a model of the proposed building using Autodesk Revit.			
3. Analyze applicable codes and standards.			
4. Create floor plans and egress plans.			
5. Create roof plans.			
6. Create building and wall sections.			
7. Create exterior elevations and renderings.			
8. Create construction details.			
9. Create stair details.			
10. Prepare working drawings using commercial drafting conventions and Autodesk Revit.			
11. Revise working drawings to address deficiencies.			
12. Assess working drawings for continuity and coordination.			

PROJ 228 - Applied Research: Capstone Project

You will use the technical problem-solving process, advanced research skills, and knowledge acquired in previous courses to complete an applied research project. You will present and defend your unique solution to an architectural design problem in a written report and oral presentation.

Credit unit(s): 4.0
Prerequisites: ADMN 104, ADMN 105, BLDG 220, CNST 222, CODE 201, DRFT 210, DSGN 232, TCOM 102, TCOM 103, (DRFT 233, DRFT 234, CODE 300)
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Analyze design criteria based on defined project parameters.			
2. Analyze National Building Code of Canada (NBCC) requirements based on a preliminary design.			
3. Develop a proposal that reflects design criteria and addresses technical challenges.			
4. Apply advanced research skills related to a technical challenge.			
5. Assemble short form specifications for materials.			
6. Evaluate products using technical criteria.			
7. Prepare an estimate of materials and labour.			
8. Prepare a complete set of architectural working drawings.			
9. Assemble data to provide recommendations and conclusions.			
10. Generate a cohesive technical report.			
11. Present a project in a professional setting.			
12. Defend project conclusions.			

BLDG 302 - Building Construction: High-Performance Building Enclosures

You will examine the effects of heat, vapour, and air flow in high-performance building enclosures. You will design and build a prototype of a high-performance assembly.

Credit unit(s): 4.0
Prerequisites: BLDG 222
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss drivers for high-performance building.			
2. Analyze heat, vapour, air, and soil gas control in high-performance foundations.			
3. Analyze heat, vapour, and air control in high-performance wall assemblies.			
4. Analyze heat, vapour, and air control in high-performance roof assemblies.			
5. Analyze material performance in high-performance assemblies.			
6. Design a high-performance assembly prototype.			
7. Assemble materials to build a high-performance assembly prototype.			
8. Construct a high-performance assembly prototype.			

BLDG 301 - Building Systems: Commercial

You will explore the preliminary design and integration of building engineering systems commonly used in large buildings. Your studies will include analysis of energy use and green building strategies. You will learn about typical systems used in commercial buildings and how to prepare preliminary mechanical, electrical, and plumbing (MEP) layouts.

Credit unit(s): 3.0
Prerequisites: BLDG 220
Corequisites: none
Equivalent course(s): none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1.	Analyze sustainable building strategies.			
2.	Discuss principles of lighting design for commercial buildings.			
3.	Examine typical electrical systems used in commercial buildings.			
4.	Examine typical mechanical systems used in commercial buildings.			
5.	Examine typical plumbing systems used in commercial buildings.			
6.	Sketch schematic mechanical, electrical, and plumbing layouts for commercial architectural coordination.			
7.	Formulate strategies to control sound and air quality within interior spaces.			
8.	Discuss the ergonomic design of workspaces.			
9.	Compare common fire detection, suppression, alarm, and security systems.			

ADMN 258 - Project Management and Estimating

You will be introduced to processes, guidelines, and best practices used in project management. You will learn and practice effective project management skills through real-world activities, focusing on project outcomes in addition to deliverables. You will use tools, techniques, and software commonly used for project management. The course focuses on all aspects of a construction project from initiation through project completion and reflects a range of development approaches.

Credit unit(s): 3.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Discuss the concept of project.			
2. Explain project life cycles.			
3. Use software to document project components.			
4. Demonstrate an understanding of successful stakeholder management.			
5. Use project management tools to control scope.			
6. Use project management tools to control schedule.			
7. Use project management tools to control budget.			
8. Use project management tools to control risk.			

CNST 234 - Building Construction: Design Build Project

You will explore the complexities of the design-build process by creating a piece of furniture. You will design, document, construct, and present your furniture piece. Upon completion of this project, you will evaluate the implementation of the design intentions.

Credit unit(s): 4.0
Prerequisites: CNST 233
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Apply systematic design processes to propose a custom-designed piece of furniture.			
2. Prepare a prototype model.			
3. Select construction materials.			
4. Prepare shop drawings.			
5. Prepare cost and material estimates.			
6. Revise design proposal based on prototype and cost estimate results.			
7. Demonstrate shop safety.			
8. Use hand tools and power tools.			
9. Practice construction techniques.			
10. Construct a piece of furniture.			
11. Present architectural information in a public setting in a professional manner.			
12. Evaluate furniture pieces, considering design intentions and execution of the design.			

CODE 300 - Building Code: Part 3 Applications 3

You will assess specific construction scenarios by interpreting all relevant parts of the National Building Code of Canada (NBC). You will focus on establishing construction criteria for Part 3 buildings, exploring more complex building types than in prerequisite courses. You will also discuss other parts of the code that impact architectural decision-making.

Credit unit(s): 3.0
Prerequisites: CODE 201
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Classify complex buildings or parts of complex buildings based on occupancy.			
2. Interpret fire protection requirements for rated assemblies.			
3. Interpret spatial separation requirements.			
4. Interpret requirements for vertical transportation and service facilities.			
5. Evaluate buildings to establish construction limitations which prevent fire spread and collapse.			
6. Evaluate building floor areas to establish safety limitations.			
7. Design code-compliant exits.			
8. Design code-compliant spaces that meet health and accessibility requirements.			
9. Discuss the roles and responsibilities associated with Parts 4, 5, 6, 7, and 8.			

DRFT 234 - Architectural Drafting: Commercial Working Drawings for Interiors

You will produce a partial set of working drawings for a commercial building using Autodesk Revit. Your drawings will be based on preliminary design, design data, manufacturers' literature, and the National Building Code of Canada (NBC).

Credit unit(s): 4.0
Prerequisites: CODE 201, DSGN 234,
Corequisites: DSGN 235
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Create a building model based on the preliminary design of a commercial mixed occupancy interior using Autodesk Revit.			
2. Analyze applicable codes and standards.			
3. Create floor plans and egress plans.			
4. Create wall sections and details.			
5. Create interior elevations, renderings, and signage details.			
6. Create millwork details.			
7. Create reflected ceiling plans.			
8. Create flooring and furniture plans.			
9. Create architectural schedules.			
10. Prepare working drawings using commercial drafting conventions and Autodesk Revit.			
11. Revise working drawings to address deficiencies.			
12. Assess working drawings for continuity and coordination.			

DSGN 235 - Design Studio: Commercial Mixed Occupancy 2

You will fully develop a final design proposal for a commercial mixed-occupancy interior, based on your preliminary design from DSGN 234. You will prepare and present the proposal in a professional setting.

Credit unit(s): 4.0
Prerequisites: CODE 201, DSGN 234
Corequisites: DRFT 234
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Propose a flooring design solution.			
2. Propose a ceiling design solution.			
3. Propose a millwork design solution.			
4. Propose a furniture design solution.			
5. Propose a layout for a customer-interaction space.			
6. Propose a wayfinding and signage design solution.			
7. Propose façade improvements to compliment the interior design proposal.			
8. Assess the success of programme implementation in the final design.			
9. Prepare a final presentation.			
10. Solve a design problem in a timed setting.			
11. Sketch commercial buildings using watercolour, marker, and pencil crayon.			

PROJ 228 - Applied Research: Capstone Project

You will use the technical problem-solving process, advanced research skills, and knowledge acquired in previous courses to complete an applied research project. You will present and defend your unique solution to an architectural design problem in a written report and oral presentation.

Credit unit(s): 4.0

Prerequisites: ADMN 104, ADMN 105, BLDG 220, CNST 222, CODE 201, DRFT 210, DSGN 232, TCOM 102, TCOM 103, (DRFT 233, DRFT 234, CODE 300)

Corequisites: none

Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>Competent: I can apply this outcome without direction or supervision. Learning: I am still learning skills and knowledge to apply this outcome. None: I have no knowledge or experience related to this outcome.</p>	Competent	Learning	None
1. Analyze design criteria based on defined project parameters.			
2. Analyze National Building Code of Canada (NBCC) requirements based on a preliminary design.			
3. Develop a proposal that reflects design criteria and addresses technical challenges.			
4. Apply advanced research skills related to a technical challenge.			
5. Assemble short form specifications for materials.			
6. Evaluate products using technical criteria.			
7. Prepare an estimate of materials and labour.			
8. Prepare a complete set of architectural working drawings.			
9. Assemble data to provide recommendations and conclusions.			
10. Generate a cohesive technical report.			
11. Present a project in a professional setting.			
12. Defend project conclusions.			