Architectural Technologies

PLAR Student 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

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 pre-requisites and co-requisites

Some courses have one or more other courses that must be completed first (pre-requisite) or at the same time (co-requisite). 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 co-requisites.

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 assessment 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 Services once you have signed approval on your PLAR Application Form. The PLAR fee will be added to your student account.
6. **Finalize** a detailed Assessment Plan with your assigned assessor**.**
7. **Complete** assessment before your PLAR registration expires.

E. PLAR contact person

Contact the person below to arrange a consultation **after** you have read this guide and general PLAR information **and** rated yourself for each course (see next session). 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.

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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
ADMN 104	Contract Administration: Ethics, Safety and Cost Estimating	
ADMN 105	Contract Administration: Specifications and Construction Accounting	
ADMN 258	Project Management and Estimating	
BLDG 220	Building Systems: Preliminary Design	
BLDG 221	Building Systems: Commercial Buildings	
BLDG 222	Building Systems: Building Science	
BLDG 250	Building Systems: Commercial Interiors	
CNST 122	Building Construction: Wood Frame Residential 1	
CNST 221	Building Construction: Residential Construction 2	
CNST 222	Building Construction: Commercial Fundamentals	
CNST 224	Building Construction: Commercial Buildings 2	
CNST 232	Building Construction: Commercial Buildings 1	
CNST 233	Building Construction: Commercial Interiors	
CNST 234	Building Construction: Furniture Construction	

COURSE CODE	COURSE NAME	Delivered by another department/program
CODE 100	Building Code: Part 9 Applications 1	
CODE 101	Building Code: Part 9 Applications 2	
CODE 200	Building Code: Part 3 Applications 1	
CODE 201	Building Code: Part 3 Applications 2	
CODE 300	Building Code: Part 3 Applications 3	
COOP 101	Co-operative Work Term	Coop Education
COOP 201	Co-operative Work Term	Coop Education
COOP 301	Co-operative Work Term	Coop Education
DRFT 109	Architectural Drafting: Fundamental Techniques	
DRFT 110	Architectural Drafting: Computer-Aided Techniques 1	
DRFT 111	Architectural Drafting: Computer-Aided Techniques 2	
DRFT 210	Architectural Drafting: Computer-Aided Techniques 3	
DRFT 220	Architectural Drafting: Residential Working Drawings 1	
DRFT 224	Architectural Drafting: Residential Working Drawings 2	
DRFT 233	Architectural Drafting: Commercial Working Drawings	
DRFT 234	Architectural Drafting: Commercial Working Drawings	
DSGN 121	Design Studio: Fundamentals	
DSGN 231	Design Studio: Residential	
DSGN 232	Design Studio: Institutional	
DSGN 234	Design Studio: Commercial Mixed Occupancy 1	
DSGN 235	Design Studio: Commercial Mixed Occupancy 2	
HIST 221	Architectural History: Context for Saskatchewan	
MATH 115	Calculus for Architectural Technologies	Arts & Sciences
MGMT 228	Management Principles	

COURSE CODE	COURSE NAME	Delivered by another department/program
PHYS 227	Physics: Statics and Strength of Materials	Arts & Sciences
PHYS 228	Physics: Light, Heat and Sound	Arts & Sciences
PROJ 228	Applied Research: Capstone Project	
RENO 220	Architectural Drafting: Renovation Working Drawings	
RENO 222	Design Studio: Commercial Adaptive Re-use	
SRVY 228	Surveying: Introduction to Survey and Building Layout	
STAT 200	Statistics for Technology	Arts & Sciences
STRU 240	Structural Design: Structural Steel	
TCOM 102	Workplace Communication	Arts & Sciences
TCOM 103	Technical Communication	Arts & Sciences

ADMIN 104 – Contract Administration: Ethics, Safety and Cost Estimating

You will be introduced to the roles and responsibilities of people involved in construction projects. You will consider professional ethics, liability, safety and contractual responsibility. You will learn the basic principles of cost estimating.

Credit unit(s): 4.0
Pre and Co Requisites: none
Equivalent course(s): ADMN 225

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. Explain the basic principles of professional ethics.			
2. Summarize the relationship between ethics and professional liability.			
3. Discuss the roles, responsibilities, and ethics of people involved in the construction industry.			
4. Identify each phase of work in the design and construction process.			
5. Explain the duties of each party during various phases of work.			
6. Describe typical meeting agendas and other documents used in contract administration.			
7. Identify safe construction practices.			
8. Describe construction site management.			
9. Examine workplace safety regulations.			
10. Appraise residential drawings to determine material quantities.			
11. Estimate labour requirements.			
12. Estimate cost of labour, materials, equipment, and overhead.			

ADMN 105 – Contract Administration: Specifications and Construction Accounting

You will learn the fundamentals of specifying products for construction. You will also study simple construction accounting and finance.

Credit unit(s): 3.0
Pre and Co Requisites: none
Equivalent course(s): ADMN 226

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. Discuss value engineering and life-cycle costing of a building.			
2. Prepare a preliminary budget for a commercial building.			
3. Determine the cost of the building assembly.			
4. Describe the methods to monitor rate of progress for a construction project.			
5. Demonstrate basic principles of general accounting.			
6. Apply basic principles of construction accounting.			
7. Examine bidding documents.			
8. Examine quality control and inspection documents.			
9. Prepare specifications for a building project.			

ADMN 258 – Project Management and Estimating

You will be introduced to estimating and control concepts within construction project management. You will practice your skills by using project management software and spreadsheets. The course focuses on all aspects of a project, from its initiation to its close out. You will use your skills to plan a construction project.

Credit unit(s): 3.0
Pre Requisites: ADMN 105 and PROJ 228 (concurrent)
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. Discuss project management concepts.			
2. Explain the process to initiate a project.			
3. Create a project plan.			
4. Use project management software to plan construction projects.			
5. Use project management software to work with schedules and reports.			
6. Use spreadsheet software to develop cost data for work packages.			
7. Use spreadsheet software to determine total cost for an entire construction project.			
8. Use spreadsheet software to compare alternate costs due to changes in project.			
9. Explain the methods used to execute a project plan.			
10. Explain monitoring requirements of a project.			
11. Discuss closing requirements of a project.			

BLDG 220 – Building Systems: Preliminary Design

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

Credit unit(s): 4.0
Pre Requisites: CNST 221
Equivalent course(s): BUSY 220

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. Discuss sustainability in building.			
2. Discuss energy requirements of National Building Code (NBC) 9.36.			
3. Summarize lighting design principles for residential buildings.			
4. Summarize lighting design principles for non-residential buildings.			
5. Summarize mechanical, electrical, and plumbing (MEP) design principles for residential buildings.			
6. Summarize MEP design principles for non-residential buildings.			
7. Sketch schematic MEP layouts from the perspective of architectural coordination.			
8. Use psych~~r~~ometric data.			
9. Calculate R-values using isothermal plane and parallel path methods.			
10. Calculate total building heat flow.			

BLDG 221 – Building Systems: Commercial Buildings

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. You will learn to prepare preliminary layouts of mechanical, electrical, and plumbing (MEP) equipment.

Credit unit(s): 4.0
Pre Requisites: BLDG 220, BLDG 222
Equivalent course(s): BUSY 222

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 energy performance requirements defined in the National Building Code 9.36.			
2. Analyze energy performance requirements defined in the National Energy Code.			
3. Calculate energy usage of buildings using digital tools.			
4. Compare common heating, ventilation and air conditioning (HVAC) systems.			
5. Examine passive methods of heating, cooling and ventilating.			
6. Examine electrical power requirements for grid-connected and stand-alone systems.			
7. Examine distribution and space requirements for power.			
8. Examine distribution and space requirement for water and sewer.			
9. Choose mechanical, electrical, and plumbing (MEP) equipment based on preliminary design criteria.			
10. Prepare schematic MEP layouts.			
11. Analyze energy performance requirements defined in the National Building Code 9.36.			

BLDG 222 – Building Systems: Building Science

You will examine the effects of heat, vapour, and air flow in building enclosures. You will also examine the effect of climate and weather on building enclosures. You will consider ways to successfully design building assemblies and connections using building science principles.

Credit unit(s): 3.0
Pre Requisites: BLDG 220, CNST 222
Equivalent course(s): LAND 220

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. 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. Investigate common building envelope failures.			
8. Propose energy upgrades for an aging building, complying with National Building Code 9.36.			
9. Appraise the effect of building envelope retrofits when applied to aging buildings.			

BLDG 250 – Building Systems: Commercial Interiors

You will explore the preliminary design and integration of building engineering systems that affect interior spaces in large buildings. You will learn to prepare preliminary layouts of lighting, electrical, signaling, fire suppression, way-finding, and systems ceilings, flooring and furniture.

Credit unit(s): 4.0
Pre Requisites: BLDG 220
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. Recommend "green" building strategies in reference to current programs.			
2. Discuss principles of lighting design for commercial interiors.			
3. Compare common luminaires and lighting controls.			
4. Select luminaries for a commercial retail space.			
5. Compare common light sources and ballasts.			
6. Calculate light levels using inverse-square and zonal cavity methods.			
7. Specify luminaries and accessories for a multi-purpose space.			
8. Formulate strategies to control sound and air quality within interior spaces.			
9. Discuss ergonomic design of office and other work spaces.			
10. Examine specification parameters for choosing integrated interior systems.			
11. Design an integrated office space including schematic technical drawings.			
12. Examine electrical power distribution, signal distribution and communication requirements.			
13. Compare common fire detection, suppression, alarm and security systems.			
14. Analyze way-finding in a large institutional building.			

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
Co Requisites: CODE 100
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 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.			

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
Pre Requisites: CNST 122, CODE 100
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 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.			

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
Pre Requisites: CNST 221
Co Requisites: CODE 200
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. Differentiate between residential and commercial construction approaches.			
2. Examine common foundation systems.			
3. Examine common load-bearing wall options.			
4. Examine common low-sloped roof options.			
5. Examine common sloped roof options.			
6. Analyze thermal, vapour, air, and moisture control needs of assemblies and connections.			
7. Use technical criteria to select construction materials.			
8. Design construction details for foundation systems.			
9. Design construction details for load-bearing wall systems.			
10. Design construction details for roof systems.			
11. Design transitions between assembly systems.			

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
Pre Requisites: CNST 232
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. Examine steel frame systems.			
2. Examine concrete frame systems.			
3. Examine common materials used to enclose structural frames.			
4. Analyze thermal, vapour, air, and moisture control needs of assemblies and connections.			
5. Use technical criteria to select construction materials.			
6. Design construction details for exterior doors.			
7. Design construction details for exterior windows.			
8. Design construction details for partitions.			
9. Design construction details for differential movement.			
10. Design construction details for air-barrier longevity.			
11. Design construction details for transitions between assembly systems.			

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
Pre Requisites: CNST 222, CODE 200
Equivalent course(s): CNST 223

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. Differentiate between load-bearing wall and structural frame design approaches.			
2. Examine heavy timber frame systems.			
3. Examine steel frame systems.			
4. Analyze thermal, vapour, air, and moisture control needs of assemblies and connections.			
5. Design construction details for in-fill wall systems.			
6. Design construction details for floor systems.			
7. Design construction details for roof systems.			
8. Design construction details for transitions between assembly systems.			
9. Design construction details for masonry openings.			
10. Design positive drainage for roofs.			
11. Prepare elements of commercial working drawings.			

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. Architectural Woodwork Manufacturers Association of Canada (AWMAC) standards will be examined as part of your studies.

Credit unit(s): 3.0
Pre Requisites: CNST 222, CODE 200
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. Use technical criteria to select interior construction materials and finishes.			
2. Examine interior construction assemblies.			
3. Examine architectural woodwork applications.			
4. Design construction details for partitions.			
5. Design construction details for floors.			
6. Design construction details for interior openings.			
7. Examine Architectural Woodwork Manufacturers Association of Canada (AWMAC) standards.			
8. Design construction details for millwork.			
9. Design transitions between assembly systems.			

CNST 234 – Building Construction: Furniture Construction

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
Pre Requisites: CNST 233
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. 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.			
13. Prepare a portfolio.			

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) relating to single-family dwellings. You will discuss typical construction materials and methods.

Credit unit(s): 2.0
Co Requisites: CNST 122
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. Discuss the impact of building regulations in construction.			
2. Explain the characteristics of basic structural systems as defined by Part 9 of the National Building Code of Canada (NBC).			
3. Describe the properties of basic construction materials used in single-family dwellings.			
4. Describe the requirements for building envelope design as defined by NBC Part 9.			
5. Sketch construction assemblies that meet the requirements of NBC Part 9.			
6. Evaluate single-family dwellings using NBC Part 9.			

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 to all types of Part 9 buildings.

Credit unit(s): 2.0
Pre Requisites: CODE 100
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 relationships between Part 3 and Part 9 of the National Building Code of Canada (NBC).			
2. Distinguish between requirements for single-family dwellings and other NBC Part 9 buildings.			
3. Classify NBC Part 9 buildings by occupancy.			
4. Interpret stair construction requirements for NBC Part 9 buildings.			
5. Interpret building envelope requirements for NBC Part 9 buildings.			
6. Interpret exit requirements for NBC Part 9 buildings.			
7. Analyze typical residential construction techniques.			
8. Discuss the requirements of NBC 9.36.			

CODE 200 – Building Code: Part 3 Applications 1

You will evaluate buildings using Part 9 and Part 3 of the National Building Code of Canada (NBC). Your analysis of buildings will include classifications, fire restrictions and exit requirements.

Credit unit(s): 3.0
Pre Requisites: CNST 221, CODE 101
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. Evaluate buildings to establish Part 3 or Part 9 applicability using the National Building Code of Canada (NBC).			
2. Classify buildings by fire-resistance of construction assemblies.			
3. Analyze buildings to establish requirements for spatial separation.			
4. Analyze multiple-occupancy buildings to establish requirements for fire compartments, fire separations and fire walls.			
5. Propose passive and active construction fire resistance options for buildings.			
6. Analyze floor plans to establish means of access.			
7. Propose assemblies to meet fire and sound resistance ratings in Part 3 buildings.			
8. Examine basic heating, cooling, plumbing, electrical requirements for small wood-frame buildings.			
9. Build a framing model based on light wood-frame construction techniques.			

CODE 201 – Building Code: Part 3 Applications 2

You will continue to assess buildings using Part 9 and Part 3 of the National Building Code of Canada (NBC). Your will complete a code review for a Part 9 renovation. You will also interpret means of egress, fire and sound ratings, and universal design criteria in Part 3 buildings.

Credit unit(s): 2.0
Pre Requisites: CNST 222, CODE 200,
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. Prepare a code review for a renovation.			
2. Examine mitigation techniques for dangerous materials, including soil gasses and asbestos.			
3. Interpret requirements for secondary suites.			
4. Interpret washroom requirements based on building occupancy.			
5. Analyze floor plans to establish means of egress in NBC Part 3 buildings.			
6. Analyze floor plans to establish spatial separation in multiple-occupancy NBC Part 3 buildings.			
7. Propose assemblies to meet fire and sound resistance ratings in NBC Part 3 buildings.			
8. Interpret universal design standards.			

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.

Credit unit(s): 2.0
Pre Requisites: CODE 201
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. Interact with building officials and construction professionals.			
2. Examine the role of the Underwriters Laboratories of Canada (ULC) in defining fire resistance ratings.			
3. Evaluate buildings to establish requirements for spatial separation.			
4. Design exit stairs.			
5. Design firewalls.			
6. Choose interior finishes based on flame-spread and smoke-development ratings.			

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
Pre and Co Requisites: 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. 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
Pre and Co Requisites: 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. 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
Pre and Co Requisites: 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. 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.			

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
Pre and Co Requisites: 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. 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

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

Credit unit(s): 2.0
Pre and Co Requisites: 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. 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.			

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
Pre and Co Requisites: 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. 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 210 – Architectural Drafting: Computer-Aided Techniques 3

You will expand your skills using Revit for architectural application. You will use the software to create architectural drawings commonly found in commercial sets. This course allows you to practice your Building Information Modelling (BIM) skills.

Credit unit(s): 1.0
Pre Requisites: DRFT 224
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. Examine the use of dimensions and grids in commercial drafting.			
2. Organize drawing information using Revit workflow principles.			
3. Create a model.			
4. Prepare a partial set of working drawings using commercial drafting conventions.			

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
Pre Requisites: CNST 122, CODE 100, DRFT 110
Co Requisites: CNST 221, CODE 101
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. Use AutoCAD to create architectural drawings.			
2. Apply architectural drafting conventions to residential set of working drawings.			
3. Apply annotations, including dimensions and other critical information.			
4. Analyze a preliminary design of a house to establish horizontal and vertical relationships.			
5. Analyze structural requirements for a single-storey house.			
6. Create a main floor plan.			
7. Create a basement plan.			
8. Create a building section.			
9. Create a wall section.			
10. Create truss and floor layouts.			
11. Create site and roof plans.			
12. Revise working drawings to address deficiencies.			
13. Assess working drawings for continuity and coordination.			

DRFT 224 – Architectural Drafting: Residential Working Drawings 2

You will produce residential working drawings using computer drafting software, 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
Pre Requisites: CNST 221, CODE 101, DRFT 220
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. Discuss copyright and ethics in residential design.			
2. Propose a custom two-storey house based on a re-design of preliminary sketches.			
3. Assess structural requirements.			
4. Create floor plans.			
5. Create building and wall sections.			
6. Create exterior elevations.			
7. Create construction details.			
8. Create interior elevations and details, including millwork.			
9. Create architectural schedules.			
10. Create site plans.			
11. Prepare working drawings using commercial drafting conventions.			
12. Revise working drawings to address deficiencies.			
13. Assess working drawings for continuity and coordination.			

DRFT 233 – Architectural Drafting: Commercial Working Drawings

You will produce a partial set of working drawings for a commercial building using 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
Pre Requisites: CNST 232, CODE 201, DRFT 210
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. Propose a commercial building based on preliminary sketches.			
2. Create a model of the proposed building using Revit.			
3. Analyze applicable codes and standards.			
4. Create floor plans.			
5. Create roof plans.			
6. Create building and wall sections.			
7. Create exterior elevations.			
8. Create construction details.			
9. Create stair details.			
10. Prepare working drawings using commercial drafting conventions and Building Information Modelling (BIM) workflows.			
11. Revise working drawings to address deficiencies.			
12. Assess working drawings for continuity and coordination.			

DRFT 234 – Architectural Drafting: Commercial Working Drawings

You will produce a partial set of working drawings for a commercial building using 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
Pre Requisites: CODE 201, DRFT 210, DSGN 234
Co Requisites: CODE 300
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. Create a building model based on the preliminary design of a commercial mixed occupancy interior using Revit.			
2. Analyze applicable codes and standards.			
3. Create floor plans and egress plans.			
4. Create wall sections and details.			
5. Create interior elevations and signage details.			
6. Create millwork details.			
7. Create reflected ceiling plans.			
8. Create flooring and furniture plans.			
9. Create finish schedules.			
10. Prepare working drawings using commercial drafting conventions and Building Information Modelling (BIM) workflows.			
11. Revise working drawings to address deficiencies.			
12. Assess working drawings for continuity and coordination.			

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.

Credit unit(s): 4.0
Pre and Co Requisites: none
Equivalent course(s): GRPH 121

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. Identify the elements and principles of design.			
2. Use manual techniques to demonstrate design fundamentals.			
3. Use software to demonstrate design fundamentals.			
4. Prepare theory plates that demonstrate the rules of design.			
5. Revise theory plates using the rules of design.			
6. Defend revised theory plates.			
7. Interpret an inspirational prompt to establish an emotional context for design.			
8. Propose a three-dimensional design solution that demonstrates emotional context.			
9. Create a model that communicates design intent.			
10. Propose materials that express the aesthetic and emotional relationship between design inspiration and realization.			
11. Reflect on the success of three-dimensional models.			
12. Sketch small objects using watercolour, marker and pencil crayon.			

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
Pre Requisites: DSGN 121
Equivalent course(s): GRPH 122

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. Discuss the design process.			
2. Implement strategies for collecting design information.			
3. Identify technical parameters that will influence a design.			
4. Use SketchUp to create three-dimensional representations.			
5. Formulate a design programme.			
6. Calculate space allocations based on room use and furniture criteria.			
7. Evaluate interactions between activity zones and circulation spaces.			
8. Prepare a preliminary design of a house.			
9. Propose materials and finishes that meet programme criteria.			
10. Prepare finalized presentation drawings, including renderings.			
11. Present a design in a professional setting.			
12. Evaluate design proposals.			
13. Sketch residential items using watercolour, marker and pencil crayon.			

DSGN 232 – Design Studio: Institutional

You will use the design process to plan and design an institutional project that meets specialized client needs. You will present and critique your design in a professional setting.

Credit unit(s): 4.0
Pre Requisites: DSGN 231
Equivalent course(s): GRPH 220

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. Establish user goals and objectives using research techniques.			
2. Implement strategies for collecting design information.			
3. Formulate a design programme.			
4. Formulate a design concept.			
5. Develop schematic drawings.			
6. Propose preliminary floor plans.			
7. Propose preliminary pictorial views using digital rendering techniques.			
8. Propose materials and finishes that meet programme criteria.			
9. Propose furniture, furnishings, and equipment (FF&E) that meet programme criteria.			
10. Prepare finalized presentation drawings based on feedback.			
11. Present a design in a professional setting.			
12. Evaluate proposed institutional designs based on the design programme.			
13. Sketch the human form using watercolour, marker and pencil crayon.			

DSGN 234 – Design Studio: Commercial Mixed Occupancy 1

You will develop the programme and concept for a commercial mixed-occupancy interior. 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
Pre Requisites: DRFT 224, DSGN 232, CODE 200
Co Requisites: CODE 201
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. Apply systematic design processes to propose a mixed-occupancy commercial space.			
2. Formulate a design programme.			
3. Analyze functional relationships between activity zones.			
4. Propose preliminary floor plans views.			
5. Propose preliminary pictorial views.			
6. Prepare finalized presentation drawings based on feedback.			
7. Demonstrate applications of digital imaging software.			
8. Develop techniques to enhance virtual environments using digital media.			
9. Formulate a visually unified design using various two- and three-dimensional media.			
10. Compose an organized visual presentation.			
11. Produce a professional portfolio.			
12. Create a three-dimensional design.			

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. You will prepare and present the proposal in a professional setting.

Credit unit(s): 4.0
Pre Requisites: CODE 201, DSGN 234
Co Requisites: DRFT 234
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. Produce solutions to design problems.			
2. Collaborate with industry experts.			
3. Propose materials and finishes based on programme criteria.			
4. Propose furniture, furnishings, and equipment (FF&E) based on programme criteria.			
5. Design flooring plans.			
6. Design reflected ceiling plans.			
7. Design custom millwork.			
8. Revise designs based on feedback.			
9. Prepare finalized presentation drawings.			
10. Present a design in a professional setting.			
11. Evaluate commercial mixed-occupancy designs based on the design programme.			
12. Sketch commercial buildings using watercolour, marker and pencil crayon.			

HIST 221 – Architectural History: Context for Saskatchewan

Your studies will focus on a survey of art, culture and architecture in indigenous, classical, medieval, renaissance and modern societies. You will gain an understanding of the relationship between architecture and social values, and the influence of early precedents on later design. You will also examine Saskatchewan's architectural heritage and analyze case studies in building preservation, restoration and rehabilitation.

Credit unit(s): 3.0
Pre and Co Requisites: none
Equivalent course(s): HIST 220

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. Examine the geographic and cultural influences on indigenous housing.			
2. Examine typical characteristics of classical architecture.			
3. Examine typical characteristics of medieval architecture.			
4. Examine typical characteristics of post-renaissance architecture.			
5. Illustrate prominent 20th century architectural styles.			
6. Distinguish important design elements of Saskatchewan architecture.			
7. Record heritage elements of a local commercial district.			
8. Evaluate the heritage value of a local building.			
9. Recommend intervention strategies based on Standards and Guidelines.			

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
Pre and Co Requisites: none
Equivalent course(s): ADMN 220, TCOM 227

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. 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.			

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
Pre Requisites: ADMN 104, ADMN 105, BLDG 220, (CNST 232 or CNST 233), CODE 201, DRFT 210, DSGN 232, PHYS 227, PHYS 228, SRVY 228, TCOM 102, TCOM 103, (BLDG 221(concurrent), DRFT 233(concurrent)) or (BLDG 250(concurrent), DRFT 234(concurrent))
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 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. Calculate engineering requirements based on preliminary data.			
6. Assemble short form specifications for materials.			
7. Evaluate products using technical criteria.			
8. Prepare an estimate of materials and labour.			
9. Prepare a complete set of architectural working drawings.			
10. Assemble data to provide recommendations and conclusions.			
11. Generate a cohesive technical report.			
12. Present a project in a professional setting.			
13. Defend project conclusions.			

RENO 220 – Architectural Drafting: Renovation Working Drawings

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

Credit unit(s): 4.0
Pre Requisites: DRFT 224
Equivalent course(s): DRFT 231, DRFT 252

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. Collaborate with team members to manage projects.			
2. Compare past construction systems to those used in the present.			
3. Examine conditions of an existing house.			
4. Use architectural data collection methods to document an existing house.			
5. Prepare an inspection report.			
6. Prepare as-found drawings.			
7. Propose a preliminary design for a house addition and renovation.			
8. Develop solutions to meet technical criteria.			
9. Create floor plans.			
10. Create elevations and building sections.			
11. Create construction details for the affected area.			
12. Prepare working drawings using renovation drafting conventions.			
13. Assess working drawings for continuity and coordination.			

RENO 222 – Design Studio: Commercial Adaptive Re-use

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
Pre and Co Requisites: DRFT 224
Co Requisites: CODE 201
Equivalent course(s): DSGN 233

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. Collaborate with team members to manage projects.			
2. Compare past construction systems to those used in the present.			
3. Examine conditions of an existing house.			
4. Use architectural data collection methods to document an existing house.			
5. Sketch elements of architecturally significant buildings using watercolour, marker and pencil crayon.			
6. Prepare an inspection report.			
7. Prepare as-found drawings.			
8. Propose a preliminary design for a commercial adaptive reuse project using the design process and Revit phasing techniques.			
9. Develop solutions to meet technical criteria.			
10. Create floor plans.			
11. Create interior elevations and interior construction details.			
12. Prepare working drawings using renovation drafting conventions.			
13. 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
Pre and Co Requisites: none
Equivalent course(s): SRVY 120

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. 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.			

STRU 240 – Structural Design: Structural Steel

You will learn how to do a preliminary design of steel structures as used in commercial buildings. You will use the Handbook of Steel Construction and Part 4 of the National Building Code of Canada to complete a preliminary design of a low-rise building. Your studies will also include and introduction to wood and steel structural design.

Credit unit(s): 4.0
Pre Requisites: PHYS 227
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. Discuss the basic properties of structural wood, steel, and concrete.			
2. Examine the effect of structural materials on building design.			
3. Examine the relationship between building mechanical systems and structural elements.			
4. Calculate gravity loads on structures.			
5. Calculate wind loads on structures.			
6. Trace loads through structural frame buildings.			
7. Calculate external loads on individual structural members.			
8. Calculate internal stresses for individual structural members.			
9. Analyze design criteria for bending members.			
10. Select bending members from the Handbook of Steel Construction selection tables.			
11. Analyze design criteria for compression members.			
12. Select compression members from the Handbook of Steel Construction selection tables.			
13. Examine the Wood Design Manual and the Concrete Design Handbook.			