



Canadian Board of Examiners
for Professional Surveyors

Conseil canadien des examinateurs
pour les arpenteurs-géomètres

S8 – Professional Practice

Content

- This document is a high-level curriculum design which captures the key principles, competencies, learning outcomes and syllabus items proposed for the updated curriculum specific to S8 – “Professional Practice”.

S8: Professional Practice

LEARNING OBJECTIVES

- Establish and then expand the knowledge required for a cadastral land surveyor
- Establish fundamental knowledge of professional practice

Key Principles	Motivation	Syllabus Items	Competency/Learning Outcomes
<p>BUSINESS LAW & PRACTICES</p>	<p>Surveyors are often owners or partners of businesses, employers, including supervisors require an understanding of employment legislation and regulations</p> <p>Surveyors often enter into contracts or bids for projects in the private or public sector</p> <p>Surveyors may be retained as an Expert Witness in court proceedings</p>	<ul style="list-style-type: none"> ● Types of business entities and arrangements—pros and cons of each ● Duties, responsibilities, and liabilities <ul style="list-style-type: none"> ○ Directors of a corporation ○ Shareholders of a corporation ● Types of insurance required by a surveying business <ul style="list-style-type: none"> ○ Professional liability (E&O) ○ General liability ○ Commercial, theft, fire, vehicle, equipment ● Contract Law <ul style="list-style-type: none"> ○ Elements of a contract ○ Differences between oral and written ○ Discharge of contract ○ Conflict of interest ○ Copyright ○ Confidentiality ○ Non-compete agreements, ○ Non-disclosure agreements ● Litigation and liability <ul style="list-style-type: none"> ○ Employer statutory obligations in Canada ○ Elements of a negligence action ○ Liability in torts ○ Due diligence 	<p>Competencies</p> <ul style="list-style-type: none"> ● Develop an understanding of the various common business structures and the duties, responsibilities and liabilities associated with each ● Think through what type of business entity is right for me or this project ● Understand statutory obligations for employers in Canada and common types of litigation and liabilities associated with practicing surveying ● Understand Professional liability insurance in Canada <ul style="list-style-type: none"> ○ Communication issues ○ Contractual issues ○ Computations issues ● Understand Builder’s lien ● Understand obligations and responsibilities in a contract ● Understand the role of the Expert Witness as a “friend of the court” and the ability to give an opinion <p>Learning outcomes</p> <ul style="list-style-type: none"> ● Demonstrate an understanding of the types and purposes of insurance, business entities and project delivery arrangements ● Write an effective “contract for services”

		<ul style="list-style-type: none">● Expert Witness● Surveyor's Opinion	<ul style="list-style-type: none">● Analyze potential loss scenarios and determine types of insurance involved● Identify the critical components for surveying services and why they are important to the surveyor
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<p>MANAGEMENT & BUSINESS SKILLS</p>	<p>Surveyors need to understand management and business skills to effectively interact with different stakeholders and to optimize the profitability of their business</p>	<ul style="list-style-type: none"> ● Business plans <ul style="list-style-type: none"> ○ Marketing ○ Strategic Planning ○ Succession Planning ○ Financial Planning ○ Organizational Structure ● Business Financing and Financials <ul style="list-style-type: none"> ○ Capitalization ○ Loans and Mortgages ○ Financial Statements, Balance sheet and income statement ○ Accounts Receivable and Accounts Payable ○ Assignment of book debts ○ Salary Markups and Multipliers ○ Capital Costs and Operating Costs ○ Project Cost Estimates ○ Owning vs. Leasing ○ Assets and Liabilities ○ Depreciation ○ Retainers ○ Goodwill ● Business Valuation for an Acquisition or Sale ● Bonding and its uses ● Basic management skills <ul style="list-style-type: none"> ○ HR 	<p>Competencies</p> <ul style="list-style-type: none"> ● Understand how a typical business is financed and how it is financially operated ● Negotiation skills ● Use business and management principles to lead people and manage business activities effectively ● Pursuing payment of an account through a Bond ● Identify the current condition of a business and the plans required to achieve the future goals ● Understand that an owner must be able to measure the fitness of a business before setting goals <p>Learning outcomes</p> <ul style="list-style-type: none"> ● Develop a basic business plan ● Demonstrate ability to read and understand financial documents as it relates to the surveying profession ● Apply knowledge of basic management skills to effectively implement appropriate HR and other management practices

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| | | <ul style="list-style-type: none">○ Social Responsibility○ Negotiation● Business codes of conduct | |
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<p>HEALTH and SAFETY</p>	<p>Surveyors need to be aware of legislated requirements as employers and employees, protect the public</p> <p>Surveyors need to actively demonstrate a safety culture: “We want everyone to go home safe every day”</p>	<ul style="list-style-type: none"> ● Health and Safety (OH&S) legislation–general & injury reporting ● Workplace inspections ● Policy statement ● OH&S program–general elements ● Hazard Control ● Emergency planning ● Site specific Safety ● Violence & harassment in the workplace <p>https://www.ccohs.ca/topics/legislation/programs/</p>	<p>Competencies</p> <ul style="list-style-type: none"> ● Use knowledge of OHS legislation to develop and implement projects safely ● Use knowledge of OHS to report incidents appropriately and effectively ● Use knowledge of rights and responsibilities of employees to report inappropriate behaviour (i.e. violence, harassment, safety. . .) ● Knowledge of OHS legislation for inclusion when project planning and submitting contracts/bids <p>Learning outcomes</p> <ul style="list-style-type: none"> ● Describe general components of safety policies or programs ● Calmly respond to critical incidents ● Conduct hazard identification and implement mitigation measures ● Demonstrate safe behaviour in all activities ● Report and document hazardous activities

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<p>PROFESSIONALISM AND ETHICS</p>	<p>Professional surveyors adhere to and uphold professional standards to protect the public</p> <p>and</p> <p>Professional Associations protect the public interest by upholding standards of competencies and conduct by educating and/or disciplining members that do not adhere to the standards</p>	<ul style="list-style-type: none"> ● Regulatory, advocacy and other associations ● Licensure versus certification ● Self-governed Professional associations <ul style="list-style-type: none"> ○ Reason for existence ○ Structure ○ Main attributes ○ Roles ○ Responsibilities ● Standards of professional practice <ul style="list-style-type: none"> ○ Government standards ○ Professional association standards ● Professional ethics and interaction <ul style="list-style-type: none"> ○ Utilitarian versus rights based approaches to ethics ○ Major components ○ Types of code of ethics ○ Client Confidentiality vs Public Protection ○ Conflict of Interest ● Professional Misconduct ● Incompetence ● Complaint process ● Discipline process ● Continuing education ● Labour mobility agreements ● Examine and report on the work of another surveyor 	<p>Competencies</p> <ul style="list-style-type: none"> ● Understand responsibilities and obligations for ensuring for Public protection ● Understand the benefits of participation in their Professional Association ● Understand the role ethics plays when carrying out professional obligations inherent with a license to practice ● Understand the importance of standards of practice <p>Learning outcomes</p> <ul style="list-style-type: none"> ● Demonstrate maintenance of competencies required for professional surveying practice.

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<p>PROJECT MANAGEMENT</p>	<p>Surveyors need to understand project management so they can safely deliver quality projects on time and on budget</p>	<ul style="list-style-type: none"> ● Introduction to Project management areas: <ul style="list-style-type: none"> ○ Integration management ○ Scope management ○ Time management ○ Cost management ○ Risk management ○ Human resources management ○ Procurement management ○ Quality management ○ Stakeholder management ○ Communication management 	<p>Competencies</p> <ul style="list-style-type: none"> ● Understand responsibilities related to the protection of the public and the environment ● Understand how a land surveyor’s work impacts the environment– i.e. considers the environment through their professional opinion ● Develop effective report writing skills, record keeping and documentation throughout the project ● Rationalize the potential profit versus the peril of cost overruns ● Understand the difference between QC and QA <p>Learning outcomes</p> <ul style="list-style-type: none"> ● Deliver projects that meet objectives ● Delivery of quality projects safely, on time and on budget ● Apply knowledge of the difference between quality control and quality assurance and how each is applied in a survey practice

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COMMUNICATIONS	Surveyors need to express themselves with multiple stakeholders to conduct their work and achieve successful outcomes	<ul style="list-style-type: none"> ● Stakeholder Identification ● Technical Communication skills <ul style="list-style-type: none"> ○ Written ○ Oral ○ Visual (Graphical) ○ Electronic ○ Technical Reports ● Presentation Skills ● Leading meetings ● Active listening skills 	<p>Competencies</p> <ul style="list-style-type: none"> ● Utilize effective written communication ● Utilize effective oral communication ● Utilize effective electronic communication ● Utilize active listening skills <p>Learning outcomes</p> <ul style="list-style-type: none"> ● Employ clear, concise and profession-specific language ● Employ appropriate formatting, grammar and spelling ● Employ effective questioning techniques ● Demonstrate a working knowledge of current technologies ● Maintain security of electronic communication. ● Describe the use and characteristics of active listening ● Clarify contradictions ● Prepare and present technical material to an audience in a clear, concise and effective way ● Prepare a written report ● Effectively communicate instructions to office/field

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DIVERSITY, EQUITY & INCLUSION	Surveyors need to recognize the diverse needs of different stakeholders	<ul style="list-style-type: none"> ● Stakeholder identification and awareness ● Understand importance of DEI in conducting work ● Unconscious Bias ● Canadian Human Rights Act ● Equitable access to opportunities ● Facilitate equitable and inclusive participation in all activities ● Remove or mitigate barriers <ul style="list-style-type: none"> ○ Discrimination ○ Gender based exclusion ○ Racism ○ Cultural differences ○ Age ○ Socio-economic standing 	<p>Competencies</p> <ul style="list-style-type: none"> ● Examine and counter own biases about diverse people and perspectives ● Understand how common biases can affect outcomes ● Adjust behaviour to accommodate different perspectives <p>Learning outcomes</p> <ul style="list-style-type: none"> ● Explain why DEI is important to the surveying profession ● Recognize and interrupt bias ● Apply knowledge and self-awareness to interact effectively with diverse team members, peers, supervisors and other stakeholders ● Demonstrate active listening to account for different perspectives and to create inclusive environments