Training Plan 2:

# Closing the Skill Gaps
# in St. Jacobs
# with Continuing Education

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# Background and Introduction

The previously completed environment scan, conducted in July 2023, summarized St. Jacobs' existing workforce, its immediate and anticipated workforce needs, and the unique barriers to recruiting and retaining workers in the community. The findings were based on a review of the 1) 2021 St. Jacobs population census from Statistics Canada; 2) job postings in St. Jacobs; 3) previous co-op positions in St. Jacobs offered to Conestoga College's students; 4) the 2022 EmployerOne Survey (subset of data from the Township of Woolwich); and 5) Chapter 8 – Economic Policies of Township of Woolwich's Official Plan. In addition, data from the environmental scan was used to develop the short-, medium-, and long-term need of the community's workforce.

Short-term community workforce needs are based on job postings that have been posted for over 30 days. Medium-term needs are based on the occupations that employers are planning to hire within the next 12 months and have identified as hard-to-fill occupations. Long-term needs are based on the occupations that employers are not hiring in the next year but have identified them as hard-to-fill (EmployerOne survey data).

Importantly, approximately one fifth of the working age population (ages 25 to 65) in St. Jacobs do not hold a post-secondary certificate, diploma, or degree; this number increases to 29% when looking at the St. Jacobs populations greater than 15 years old. The significant proportion of St. Jacobs residences not having some form of post-secondary educations is problematic because many of the short-, medium-, and long-term community workforce needs identified, requires it. Data from the 2022 EmployerOne Survey also indicated that, aside from the lack of applicants, positions were hard-to-fill mainly due to the lack of technical skills, lack of qualifications, and lack of work experiences among the candidates. Given the need for upskilling and post-secondary education in St. Jacobs, two training plans have been developed to addressed the workforce development needs of St. Jacobs. One training plan identifies relevant training programs available through Conestoga College that will support the educational requirements of the short-, medium, and long-term community workforce needs. Based on the findings of the environmental scan, a training plan was developed to identify the full-time training programs offered by Conestoga College to help employers identify relevant programs that they can hire Conestoga College students or new graduates from, to address their immediate and short-term workforce needs. Training Plan 1 can also support community workforce development leaders to guide prospective students into relevant programs that will address anticipated community workforce needs.

The other training plan identifies relevant professional development and upskilling opportunities available through Conestoga College that will allow the existing workforce to support existing skill gaps.

## Using the training plan

Training plan 2 (the current training plan) compliments Training Plan 1 by supporting the community's existing workforce through relevant upskilling and professional development opportunities (i.e., continuing education courses and micro-credentials). Continuing education courses and micro-credentials can be taken part-time, allowing employers to build capacity (i.e., specific desired/required skills) of their existing workforce without interrupting production. These opportunities can be completed within 3 to 4 months to address medium-term workforce needs.

For ease of use, this training tool is organized by the nine important skills for success (ESDC, 2023), followed by the desired/required technical skills specified by the employers identified in the initial environmental scan.

## Skills for Success

The nine skills for success, rank from highest to lowest in demand based on current employers seeking personnel include communication (72%), adaptability (48%), digital (42%), writing (30%), problem solving (27%), collaboration (20%), creativity & innovation (10%), numeracy (6%), reading (3%). Table 1 presents the percentage of employers within each broad occupational section that specified the need for a certain skill in their job posting. In addition to the nine skills for success, attention to detail and leadership skills were added due to its continual reoccurrence. The following sections describe what and provides relevant courses and micro-credentials offered by Conestoga College up support those skills requirements.

*Table 1. Proportion of employers desiring/requiring a skill for success in their job posting based on each broad occupational category (NOC 1-digit).*

| Broad Occupational Category (NOC 1-Digit) | Adaptability | Collaboration | Communication | Creativity/ Innovation | Digital | Numeracy | Problem-Solving | Reading | Writing |
|---|---|---|---|---|---|---|---|---|---|
| Business, finance and administration occupations (n=30) | 57% | 17% | 67% | 20% | 53% | 10% | 20% | 0% | 37% |
| Natural and applied sciences and related occupations (n=14) | 36% | 21% | 86% | 14% | 50% | 7% | 64% | 0% | 36% |
| Health occupations (n=6) | 50% | 50% | 83% | 0% | 33% | 0% | 0% | 0% | 50% |
| Occupations in education, law and social, community and government services (n=5) | 40% | 20% | 60% | 0% | 0% | 0% | 20% | 0% | 20% |
| Sales and service occupations (n=7) | 71% | 29% | 71% | 0% | 57% | 14% | 0% | 0% | 14% |
| Trades, transport and equipment operators and related occupations (n=14) | 29% | 7% | 71% | 0% | 29% | 0% | 36% | 7% | 21% |
| Occupations in manufacturing and utilities (n=3) | 67% | 33% | 67% | 0% | 0% | 0% | 0% | 33% | 0% |
| Total proportion of employers specifying the need for this skill (n=79) | 48% | 20% | 72% | 10% | 42% | 6% | 27% | 3% | 30% |

The 2022 EmployerOne survey also asked employers to select the top three competencies desired in their employee and found similar results. Although the competency options provided in the EmployerOne survey were not based on the nine skills for success, there were some consistent findings. For example, communication was the most desired skill, and analytical/research – understand data, analyze infromation (i.e., numeracy skills) was less demanded. However, differences were also observed. For example, 22% of employers (in the Town of Woolwich) identified that time management/organizational – meet deadlines, prioritizing (deciding what is most important, and multi-tasking was one of the top 3 competnecies desired in the employers, whereas almost half of the job listings identified that adaptability was desired. Although the findings are not directly comparable, it is important to note these consistent findings for future work.
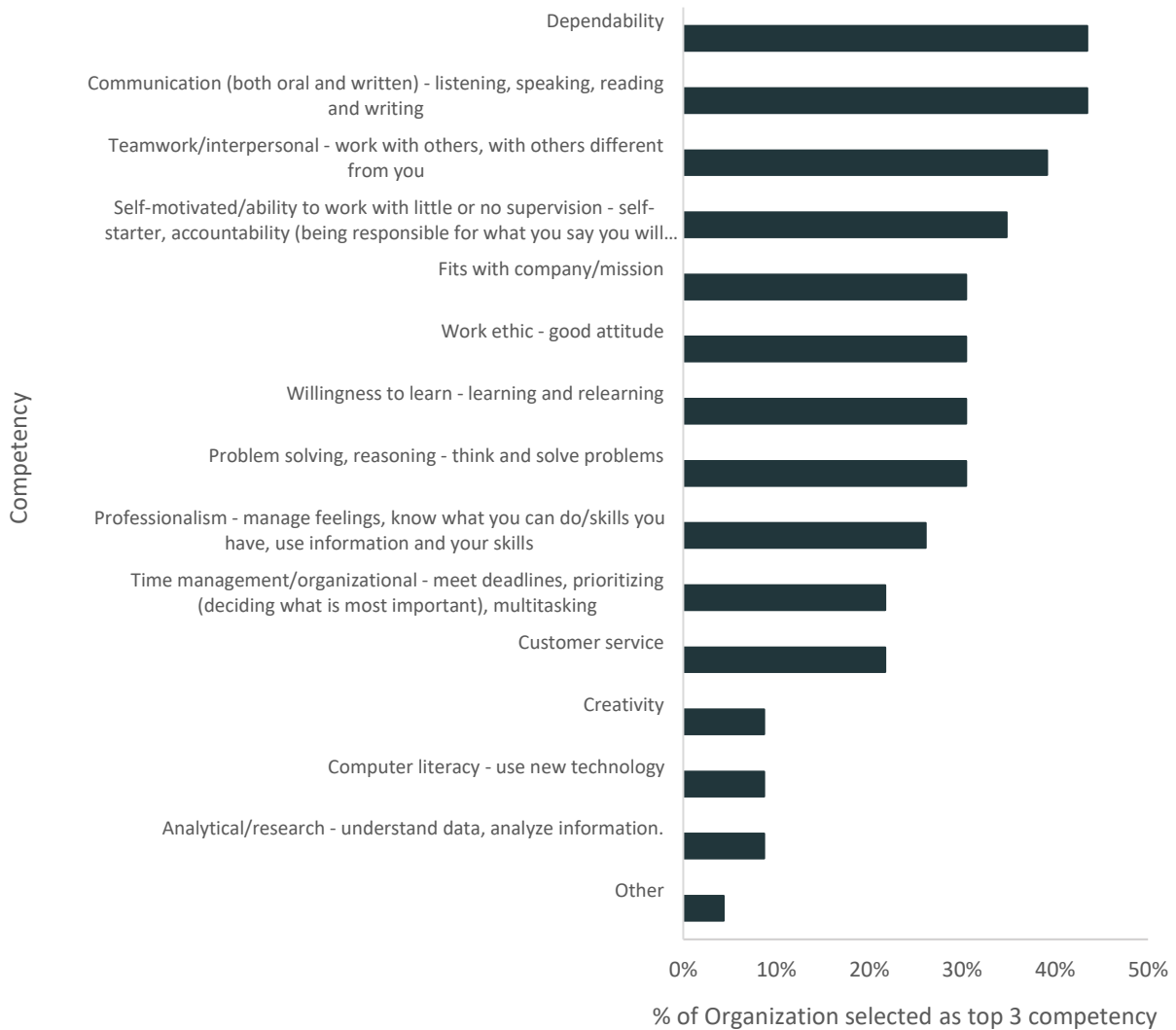


*Figure 1. Top competencies that employers seek.*

# Skills for Success

## Adaptability

The ESDC describes adaptability as the "ability to achieve or adjust goals and behaviours when expected or unexpected change occurs, by planning, staying focused, persisting, and overcoming setbacks." This skill is used when changing work plans to meet new deadlines, learning how to work with new tools and improving our skills through feedback.

Almost half of the employers looking for personnel shared that adaptability was a desired skill to have among their candidates. Some of the skills related to adaptability that's demanded from employers of St. Jacobs included: 1) ability to (re)prioritize, multi-task, and time manage in a fast past, dynamic work environment; 2) ability to work additional or varied hours; 3) ability to travel and work in various locations; 4) ability to work multiple roles; 5) flexible and willing to learn new skills.

Many continuing education courses and micro-credentials offered by Conestoga College require students to manage and prioritize their time appropriately to complete multiple assignments and tasks while meeting set deadlines. Although Conestoga College may not have continuing education courses or micro-credentials that specifically focus on building adaptability, Conestoga College offers numerous project management courses that may help individuals develop formal time management and organizational skills (Table 2).

*Table 2. Continuing education options at Conestoga College aimed to develop workers' adaptability skills.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential** | | |
| Customer Experience | Gain the tools and strategies to meet customer needs, build enduring relationships, and provide an optimal customer experience through this short three course fully online program. Expertise in customer experience will help you develop a returning customer base and gain new customers from referrals. | 3 courses 114 hrs./7 cred. |

## Collaboration

Given diversity in workplaces today, it is important to be able to work respectfully with people who have different perspectives, professions, experiences, cultures, and backgrounds. ESDC defines collaboration as the ability to contribute and support others to achieve a common goal.

Sixteen of the 79 job postings were looking for candidates who excelled and enjoyed in working in a collaborative team environment. The ability and willingness to collaborate effectively was demanded most in healthcare, sales and services, and manufacturing and utilities occupations.

Some of the skills related to collaboration demanded from employers of St. Jacobs include a 1) commitment to work collaboratively in team settings and support team members, 2) ability to build strong relationships, foster trust, and promote collaboration with key stakeholders within the organization, 3) stay positive, and treat each other with respect, kindness and celebrate our abilities, strengths and our differences. Table 3 provides continuing education options to help workers develop their collaboration skills.

*Table 3. Continuing education options at Conestoga College aimed to develop workers' collaboration skills.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential** | | |
| Collaborative and Team-Based Learning in Post-Secondary Education | The ability to work effectively in groups is one of today's most in-demand skills. This online micro-credential helps you to create plans, activities, and supports for group work so that students will get the most out of learning and working together. | 5 courses 30 hrs/5 cred |
| Business-to-Business Sales Skills | The Business-to-Business Sales Skills micro-credential provides the fundamentals of three key areas essential to the modern salesperson. You will learn the sales process in depth – from prospecting to closing, managing key strategic accounts, and will gain practical experience with customer relationship management (CRM) software. | 3 courses 126 hrs/9 cred |
| **Course** | | |
| Administrative Assistant Fundamentals | Discover and master the essentials of managerial and staff support, information and records management, communications technology, travel and meeting coordination, space planning, and office ergonomics. You'll become an indispensable member of your team by identifying opportunities and implementing solutions to turn your office into a high productivity machine. This course and its follow up (Administrative Assistant Applications) may help you prepare for the internationally-recognized Certified Administrative Professional® (CAP®) exam offered by the International Association of Administrative Professionals® (IAAP®).Note: This course is not affiliated with, nor has it been endorsed by, the International Association of Administrative Professionals® (IAAP®). | 24 hrs/1 cred |
| Anti-Racism, Discrimination and Equity | Students taking this course will learn the definition of racism and discrimination and will be able to identify the various sources of discrimination and racism resulting from cultural values and physical differences between individuals. By identifying racism and discrimination issues in North American society, students will learn how to analyze the sociological factors that cause bias and prejudice to surface in our society. The main objective of this course is to enhance sensitivity to and intolerance of mistreatment based on racial or ethnic background and appearance, and to consider how to handle these issues as professional individuals in a pluralistic Canadian society. As part of the course, students will communicate with one another through electronic discussion and learn to appreciate through various readings and assignments the many facets of racism and discrimination. This course will be of interest to workers in health services, education, human resources, and business as well as those people who want to enhance their knowledge and sensitivity to issues of racism and discrimination particularly when communicating with people from other cultures or with physical appearances that differ from their own. | 42 hrs/3 cred |

Table 3. (cont.)

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Course (cont.)** | | |
| Collaborative Framework: Working with Subject Matter Experts | This course will explore the roles and scope of the instructional designer and subject matter expert in the framework of an instructional design project. Students will develop effective conflict resolution strategies as well as interpersonal communication skills. Communication skills to provide feedback and drive course revisions will also be covered. | 42 hrs/3 cred |
| Compassion Fatigue | Compassion Fatigue has been called "the cost of caring" for helping professionals, and its effects can have lasting negative consequences on our health, wellbeing, and work performance. Those helpers who are exposed to others' trauma and suffering and who work under stressful conditions are especially vulnerable to developing compassion fatigue, vicarious trauma, and moral distress. While there are structural elements to these problems, there are also practices that individuals can put into place to lower their risk, or to recover if they've already been affected. This course will teach practical strategies for self-reflection and self-care that will build participants' resilience. | 10 hrs/1 cred |
| Counselling Gender and Diversity | Students develop knowledge and skills necessary to inform work with diverse individuals and groups with specific attributes and associated needs including sexual orientation, cultural diversity, gender-specific needs, marginalized populations, and older adults. Students critically examine the concept of diversity, stigmatized social identities and the impact on services and supports. | 42 hrs/3 cred |
| Dealing with Difficult People | Understanding people and being able to work with them is one of the major keys to management and life success. In this course, learn to identify and cope with some of the most difficult behaviours you may encounter. Topics include personality styles, establishing rapport, body language, matching and mirroring techniques, and the skills necessary to feel totally connected with individuals. | 30 hrs/2 cred |
| Achieving Success with Difficult People | This course will teach you how to see things from others' viewpoints based on their needs, values, beliefs, experiences, skills, knowledge, and self-interests. You will learn to approach difficult situations by answering the questions: who? what? where? when? how? and why? By answering these questions, you will understand who your difficult people are, what they're like, how you react to them, and their response to your actions. You will also practice analyzing your interactions with those you share space with. By observing others closely, you will learn to read their identifying characteristics. Once you can identify which type of person you're dealing with, you will be able to choose appropriate reactions to their behaviours. | 24 hrs/1 cred |

## Communication

Communication skills were the most frequently (over 70%), desired skill identified from the job postings and the 2022 EmployerOne Survey across all broad occupational categories. As defined by the ESDC research, communication is the ability to receive, understand, consider, and share information and ideas through speaking, Listening, and interactions with others. Notably, EDSC considers writing and reading to be separate skills.

Some of the specific communication skills specified included the ability to 1) maintain confidentiality and handle all interactions with diplomacy and tact; 2) prepare for and participate in difficult conversations; 3) adapt communication style based on audience to ensure understanding; 4) build and deliver effective presentations; 5) focus and use social and emotional intelligence with others; and 6) communicate professionally with others and to assimilate and understand information.

*Table 4. Continuing education options at Conestoga College aimed to develop workers' communication skills.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential** | | |
| Digital Communication for Business | The Digital Communications for Business Micro-Credential provides students with the technical, stylistic, and critical skills that are the basis of effective digital business communication. Students will focus on raising their writing competency to concisely, persuasively and accurately create documents in digital format. Students learn mastery of reports ranging from simple memos to formal reports under the guidance of a professional writer. Using social media tools, students practice and assess their social media writing capacity for corporate purposes, personal branding and communicating appropriately to different target groups. | 3 courses 126 hrs/9 cred |
| French for the Workplace | This micro-credential is aimed at individuals wishing to improve their French language skills and focus on language needs for the workplace. Students will improve their French conversational, pronunciation, and written communication skills at a high intermediate level. Through an integrated skills-based curriculum, students will learn more about the structure of French, unique terminology for a variety of business settings, introductory translation practices, and produce written work suitable for increasingly complex business situations. Additionally, students will improve their confidence in speaking and listening suitable for a variety of business situations, with a focus on French in Canada. | 2 courses 84 hrs/ 6 cred |
| Conflict Management | Managing difficult situations takes skill and practice. Develop practical skills you can apply to a variety of situations to effectively resolve disputes and deal with difficult people with tact and diplomacy. This fully online micro-credential consists of three courses in human relations, dealing with difficult people, and dispute resolution strategies | 3 courses 102 hrs/7 cred |
| Administrative assistant Essentials | This online micro-credential provides students the opportunity to learn the fundamentals of office support, records management, communications, and interpersonal skills. | 4 courses 96 hrs/4 cred |
| Workplace Fundamentals | Develop the essential skills you need to succeed in a 21st century workplace. This online micro-credential provides you with the opportunity to develop or upgrade your computer knowledge, enhance essential career skills, and learn to navigate the Windows 11 operating system. All courses are delivered asynchronously through our partnership with ed2go and must be taken through Conestoga College in order to be eligible. | 3 courses 72 hrs/4 cred |
| Supporting Employee Mental Health and Wellbeing | There is a strong need to gain a better understanding of employees' mental health needs and address them appropriately within the workplace. You will learn key principles for managing mental health disabilities with hands-on recommendations for human resources professionals, managers, and leaders. Topics will include work-from-home, social isolation, return-to-work strategies, and workplace accommodation. | 4 courses 68 hrs/4 cred |

*Table 4. (cont.)*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Course** | | |
| Customer Service and Ethics | You will focus on topics pertaining to customer service and the achievement of equity in various social and work settings, including, but not limited to, race, gender, ethnicity and social orientations. This course will enable you to identify possible strategies for empowerment in the workplace. | 42 hrs/3 cred |
| Dispute Resolution | This course surveys the major methods currently in use by organizations for resolving disputes by situating alternative dispute resolution in its historical, social, and legal context. Various ADR techniques will be examined and compared, and students will be provided with an overview of ADR mechanisms, their advantages and disadvantages, and recognize the appropriate situations in which to apply them. Special emphasis is placed on developing mediation skills. Critical issues such as getting parties to the table, ethical issues of the mediation process, power imbalances, the appropriateness of mediation and issues of culture, race and gender are addressed. Technical aspects of the mediation process covered include stages in the mediation process, how to determine the interests of the parties, how to generate options for settlement, and how to get beyond impasses. Negotiation models and the practical techniques necessary to negotiate effectively are also covered. | 42 hrs/3 cred |
| Domestic and Workplace Violence | This course will explore several key elements integral to the development of strategies to respond to the challenges that Violence presents in our working and living communities. As the title of this course suggests, students will be exploring content related to Domestic and Workplace Violence. Because the topic of Violence is immense, the study of Violence must be broken down into small units for students to explore properly, which this course does. Domestic and Workplace settings are often closely related, and each impacts the other regularly in many circumstances. Therefore, including Domestic settings and Workplace settings in the same exploration of Violence lends itself well to an insightful and meaningful experience. | 42 hrs/3 cred |
| English 1 | Effective communication is important for building relationships and successful functioning in every part of an organization. Through the different modes of reading, writing, speaking, listening, researching, analyzing, and representing information students develop the skills required for communicating effectively in personal and professional environments. Students will create a portfolio that includes communication tools and activities related to their chosen career path. An emphasis is placed on developing skills required for communicating in digital environments. | 42 hrs/3 cred |
| English 2 | This course focuses on developing and enhancing personal presentation and communication skills required to function in the workplace. Students will research and prepare a variety of standard business documents and correspondence used across industries. An emphasis will be placed on researching and compiling a targeted job search portfolio that includes cover letter, resume, and related documents. Utilizing technologies for the purpose of creating a professional presence in digital environment is introduced. | 42 hrs/3 cred |
| Keys to Effective Communication | If you often find yourself at a loss for words or lack confidence in your communication abilities, this course is for you. Each lesson works through the step-by-step process needed to become a great conversationalist. Learn to use communication to build rapport and create environments of trust, warmth, and respect. Become more confident, create a great first impression, get along well with others, and create more and better personal and professional relationships. | 24 hrs/1 cred |

## Creativity and innovation

ESDC defines creativity and innovation as the ability to imagine, develop, express, encourage, and apply ideas in ways that are novel, unexpected, or challenge existing methods and norms. Only 10% of the job postings specified the need for creativity and innovation from their candidates. Similarly, 10% of the employers from the 2022 EmployerOne Survey selected creativity and innovation as the one of the top three concepts that they were looking for in their employees. Only two broad occupational categories (i.e., Business, finance and administration occupations and natural and applied sciences and related occupations) specified the need for creativity and innovation in the job postings.

Some of the specific communication skills specified included 1) ability to conceptualize and develop initiatives/solutions; 2) unafraid to bring forth new ideas; and 3) excellent business acumen, strategic thinking, and change management skills. Continuing education options offered at Conestoga College to help workers develop their more creativity and innovation are presented in the table below (Table 5).

*Table 5. Continuing education options at Conestoga College relevant to developing creativity.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Course** | | |
| Alignment and Assessment Strategies | Design backward and build forward is an important instructional design principle. This course will explore the importance of aligning assessments to course and module outcomes. Activities and exercises which scaffold to the formative or summative assessments are discussed. The course also speaks to how to use quizzes and pre or post assessments effectively by keeping an eye to instructional design principles. | 45 hrs/3 cred |
| Design Elements and Principles | The art of attaining a visual design that is aesthetically pleasing is achieved when the elements and principles of design are followed. Students will learn and apply design elements and fundamental principles to a variety of visual designs to meet specific project objectives. | 30 hrs/2 cred |
| Creative and Critical Thinking (Leadership Development Series) | Today more than ever, leaders need to be creative and critical thinkers in order to deal with all aspects of organizational, strategic, and societal situations or environments. Learn how to think creatively and critically and apply those skills to both professional and personal situations. For leaders, fine-tuning your creative and critical thinking skills will assist you in strategic planning, decision-making, and problem solving. | 30 hrs/2 cred |

## Digital

Digital technologies in the modern workplaces play an important role in how we find and share information, solve problems and communicate with others. Digital skills, as defined by ESDC, is the ability to use digital technology and tools, such as computers, to accomplish these tasks. In St. Jacobs, 42% of the job postings searched on July 13-14, 2023 were trying to fill roles that requires digital skills. Digital skills were particularly demanded in Business, finance and administration occupations, Natural and applied sciences and related occupations, and sales and service occupations. In contrast, none of the job postings related to occupations in manufacturing and utilities occupations sought candidates with digital skills. Some of the recurring proficiency in digital tools that employers sought included:

1) Microsoft Office Suite (e.g., Excel, Access, Word, Teams, SharePoint, Outlook, PowerPoint, Visio, Access, Power BI, OneNote, Dynamics, and Publisher);
2) Customer relationship management software and lead management tools (e.g., HubSpot, Pardot, Adobe Mar-keto, etc.);
3) Project management tools (e.g., monday.com, Smartsheet, Jira, Confluence, Microsoft Project and Slack)
4) Accounting software (e.g., AccountEdge, QuickBooks, Sage)

Additional skills related to using the digital tools include aptitude to learn new software quickly, advanced excel modelling, data analysis and advanced presentation skills, marketing automation, search engine optimization, and use of social and content management tools. Table 6 presents the several continuing education options available at Conestoga College to help workers (further) develop numeracy skills.

*Table 6. Continuing education options at Conestoga College aimed to develop workers' digital savviness.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential** | | |
| Creating Accessible Digital Document | Expand your professional skill set today with this fully online, 3-course micro-credential. Specifically highlighting the requirements of the Accessibility for Ontarians with Disabilities Act (AODA) and the Integrated Accessibility Standards Regulation (IASR), this micro-credential provides a thorough understanding along with hands-on tools for creating accessible digital documents. Topics include terminology, screen readers, Word, PowerPoint, Excel, Adobe Acrobat (PDF), and World Wide Web Content Accessibility Guidelines (WCAG) 2.0. Upon completion of this micro-credential, you will be well-prepared to evaluate and create accessible digital documents for your organization or business. | 3 courses 90 hrs/6 cred |
| Computer Support Service Essentials | This micro-credential will quickly prepare you to provide computer support services as an entry level service technician. You will gain basic skills in the components of a typical PC and learn about their relationship to the computer's operating system. You will also learn about computer and operating systems software. These courses will help prepare you to write the Comp TIA certificate exam and can also be stacked and used to satisfy the full Desktop Applications Support certificate. | 3 courses 132 hrs/9 cred |
| Basic Office Software | You will develop technical and organizational skills to enhance your role as an effective office team member in a hybrid, remote, or in-person role. You will further your skills in word processing, presentation software, spreadsheets, videoconferencing, collaboration platforms, e-mail and calendaring, and file storage systems. | 3 courses 126 hrs/9 cred |

*Table 6. (cont.)*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential (cont).** | | |
| Exploring Digital Technologies | Understanding the technologies that are shaping the way contemporary businesses operate is becoming increasingly important for today's workforce. This online micro-credential will help you discover a world of possibilities through introductory courses into artificial intelligence (AI), machine learning, blockchain and the cloud. All courses are delivered asynchronously through our partnership with ed2go and must be taken through Conestoga College in order to be eligible. | 4 courses 96 hrs/4 cred |
| Basic Web Design | Whether you are looking to quickly build a website or be able to modify an existing website, this micro-credential will give you the skills needed to do basic web design. This micro-credential is comprised of three courses in web usability, an introduction to HTML, and a computer programming introduction using JavaScript. | 3 courses 128 hrs/9 cred |
| Python Foundations | The Python Foundations Micro-Credential prepares you to become a programmer and problem solver. The versatility of Python is useful for a wide range of purposes from web development and text processing to machine learning and artificial intelligence. Its extensive applicability to data analysis makes Python the program of choice for coding. Using Python to create applications for various industries will prepare you with the skills you need to succeed in software development and applications, as well as provide a foundation for data analysis. | 3 courses 126 hrs/9 cred |
| Artificial Intelligence and the Assessment of Student Learning | This micro-credential will support faculty in thinking about Artificial Intelligence (AI) and how it will impact the future of assessment in the post-secondary system. Courses will provide ideas and guidance in support of students' use of AI in assessments, as well as how faculty may use AI in assessment generation and design. | 3 courses 18 hrs/3 cred |
| Advanced Office Software | Level up your technical skills in Excel, spreadsheet analysis tools, word processing, PDF software, and document production. Put your knowledge to the test by creating your own mock Virtual Administrative Assistant business, and develop, produce, and present work for a variety of mock clients and businesses | 3 courses 126 hrs/9 cred |
| Artificial Intelligence and its Impact on Teaching | This micro-credential examines the implications and potential of AI in teaching and learning. You will learn the essential terminology and knowledge needed to navigate the evolving landscape of AI, explore diverse ways that AI can be harnessed to optimize teaching and learning, and develop the knowledge and strategies required to foster AI-literacy. | 3 courses 18 hrs/3 cred |
| Adobe Basics and Design | This Adobe Basics and Design micro-credential will provide students with the knowledge and skills needed in the desktop publishing and design industry. | 3 courses 114 hrs/8 cred |
| **Courses** | | |
| Adobe Dreamweaver | In this course, learn to create a professional website without having to write code by hand. Explore how to create HTML-based headings, paragraphs, lists, and tables; insert graphics; add links to text and images; apply cascading styles sheets; customizing the Dreamweaver workspace; and publish a finished site to the Web. | 30 hrs/2 cred |
| Adobe Dreamweaver Advanced | This course will present material for the serious or professional web designer. Concepts explored include HTML5 and CSS3, typography, layouts, navigation, interaction design, managing CSS, working with JavaScript behaviours and CSS interactivity, utilizing advanced time-saving features within Dreamweaver, and developing mobile websites using Dreamweaver and jQuery Mobile. | 30 hrs/2 cred |
| Adobe Illustrator-Digital Illustration and Design I | Using Adobe Illustrator, this course helps students develop skills and knowledge in creating digital files for graphic design projects. | 42 hrs/3 cred |
| Adobe InDesign Basics | In this course, learn to create master pages and single and multiple page documents with single and multiple text columns of text; importing text from various sources and flowing it into linked columns of various shapes and sizes; proper kerning/leading and spacing of text and combining text with imported photos and graphics. Discover how to quickly change font or photo size and how to rearrange elements within a page. | 42 hrs/3 cred |
| Adobe Photoshop 1 | In this course, develop your design and image creation skills using Adobe Photoshop. Learn to source images; create, develop, and assess various design solutions; and execute projects in a professional manner. | 42 hrs/3 cred |

*Table 6. (cont.)*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Course (cont.)** | | |
| Adobe Photoshop 2 | In this course, further develop your image correction and restoration skills using Adobe Photoshop. Learn to restore black and white images using Photoshop tools and gain skills in image correction by using, blurring, adjustment layer, layer masks, and liquifying techniques. | 42 hrs/3 cred |
| Advanced Microsoft Excel 2016 | In this course, learn how to maximize Excel's functions and capabilities. Learn to work with databases and advanced techniques for PivotTables, like creating Timelines, calculated fields, and calculated items. Explore how to use Excel's consolidation function to efficiently summarize data from multiple sources, become adept at importing external data using Excel's built-in Power Query tool, and master the art of conditional formatting to highlight duplicate entries and other common worksheet problems. | 24 hrs/1 cred |
| Advanced Microsoft Excel 2019 | This course will help you master many features in Microsoft Excel 2019/Office 365 that most users don't know exist. Learn the secret to using formula-based conditional formatting as a creative solution to common issues. You will also learn how to leverage Excel's Power Query tool to import and transform data from almost any data source. Please note: this course must be taken on a PC. It does not support MAC users or Chromebooks. | 24 hrs/1 cred |
| Advanced Office Technology | In this course, students will expand their word processing and document production skills. Students will use advanced formatting techniques and tools to create professional business documents. Students will also gain a basic understanding of integrating other software into their documents. Students will work with word processing and PDF software to create fillable forms and tables. Students will study the features of accessible documents and learn to review business documents for accessibility. | 42 hrs/3 cred |
| Advanced Spreadsheets | This course is designed to build on introductory spreadsheet concepts. Students participate in hands-on training activities that include the creation of: advanced formulas, templates to automate and validate data entry and using wizards and queries to import data into Excel. A variety of analysis tools will also be explored in this course. | 42 hrs/3 cred |
| Advanced Web Pages | In this course, you will learn to write HTML code for page content and CSS code for page styling. You'll learn the latest versions of the languages used to create modern websites. With the help of step-by-step instructions, you'll build interactive websites that collect information from visitors through email sign-up and feedback forms. In addition, you'll learn the latest and most effective techniques for presenting layouts and video that work in any browsing environment. Explore aesthetics, colour scheming, and accessibility in web page design. | 24 hrs/1 cred |
| Android Application Development | This course with familiarize the student with planning, developing, and testing mobile applications for the Android platform using Java. Students will design and build multiple apps throughout the course. Topics include: GUI design, layouts, intents, activities, databases, graphics, and touch events. | 36 hrs/3 cred |
| Data Analysis with Excel | In business today, it is very important to be able to answer the "What if" and "what does that look like" questions that come up when dealing with all of the data that is collected. Microsoft Excel® has a group of tools that will allow you to answer those questions and many more. Students will learn to organize and visually transform data to better inform stakeholders when making key business decisions. | 30 hrs/2 cred |
| Excel - Core | Learn to use Microsoft Excel to create and format spreadsheets in order to analyse data and make more informed business decisions. Discover how to create, edit, format, and print workbooks; use mathematical formulas and functions; create and format charts and shapes; insert images; cut, copy, and paste data. Please note: this course does not support MAC users. | 42 hrs/3 cred |
| Business Computing Applications | During this course, the student will learn to effectively use the Windows operating system, apply word processing techniques, create basic business presentations, and explore the power of spreadsheets. Students will also learn the skills necessary to operate effectively within the Conestoga College computing environment. An emphasis will be placed on the development of solutions to business problems using commonly available microcomputer tools. | 56 hrs/4 cred |
| Excel Expert | This course will teach advanced topics of Microsoft Excel. Students will learn how to create and manipulate data, work with templates and styles, connect to external data and links, review and protect workbooks, create custom formats and layouts, and create advanced formulas. Please note: this course does not support MAC users. | 42 hrs/3 cred |

*Table 6. (cont.)*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Course (cont.)** | | |
| Introduction to Computers | This course will familiarize students with the digital world by exploring the hardware and software of their computer system. Students will learn to use the most common functions of the Windows operating system including File Explorer for file management, utility programs, various web browsers for social media while observing and identifying security and privacy concerns and issues. Students will learn to build properly formatted documents using Microsoft Word and spreadsheets including correctly functioning formulas using Microsoft Excel and create commanding presentations with Microsoft PowerPoint while using the cloud to store and access their files. | 42 hrs/3 cred |
| Introduction to Windows 11 | File Explorer can help you manage your files and create basic text documents using WordPad. From managing files and editing photos to working with external drives, you will learn everything you need to know about getting the most from this operating system. Additionally, since security is important, you will also learn how to protect your files and protect and update Windows 11. By the time you finish this course, you will have mastered the basic skills you need to get the most from Windows 11 for both work and play. | 24 hrs/2 cred |
| Web Design for Mobile Applications | This course will familiarize the student with how to design, develop, and test websites that are mobile-friendly. Through theory and hands-on coding exercises students will learn how to leverage CSS3, HTML5, JavaScript, and a variety of open-source frameworks to create responsive, mobile first projects on the web that work equally well on desktops, smartphones, and tablets. | 36 hrs/3 cred |

## Numeracy

The ability to find, understand, use, and report mathematical information presented through words, numbers, symbols, and graphics is defined as numeracy skills (ESDC, 2022). Based on St. Jacobs job postings in July 2023, 6% of the postings sought candidates with numeracy skills. The numeracy skills identified the job postings included: mathematic skills; quantitative skills, preparation of budgets and cost estimates, and numerical analytical ability. Continuing education options for developing numeracy skills are presented in Table 7.

*Table 7. Continuing education options at Conestoga College aimed to develop workers' numeracy skills.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential** | | |
| Business Analyst Fundamentals | All organizations and businesses must manage and implement change, which is where Business Analysts play a key role in helping define needs and find appropriate solutions. This micro-credential provides the essential skills and knowledge to succeed as a starting Business Analyst. Learn the critical aspects of determining organizational needs and defining processes and supporting technology requirements to provide solutions. | 3 courses 126 hrs/9 cred |
| QuickBooks Essentials | Students will learn software features, helpful shortcuts, and useful tips. Students will create a company in a QuickBooks environment, including its chart of accounts and financial reports. Students will also learn how to prepare payroll data, process payroll transactions, set up and manage inventory, operate with multicurrency, customized forms, and using advanced reporting. Upon completion, students will be able to organize the accounting of their own small business or work efficiently as a supporting member of an accounting team in small/medium sized company. | 3 courses 126 hrs/9 cred |
| Bookkeeping Essentials | This online micro-credential is offered during evening hours and will provide you with the required skills to perform fundamental bookkeeping practices. You will acquire the necessary knowledge and skills to perform effectively in entry-level bookkeeping positions or manage your own business' bookkeeping. You will gain an understanding of financial accounting and payroll administration, as well as relevant software  (e.g., Sage50 and QuickBooks Online). | 3 courses 154 hrs/11 cred |
| **Course** | | |
| Accounting Basics I | This course examines how accounting information is used by, and meets the needs of, both internal and external users through effective and efficient communication as well as what accounting information is required by a business concern to clearly reflect the operating results of the enterprise over its operating life. Explore generally accepted accounting principles, the interpretation and preparation of financial statements, and how this information is recorded in various business records. | 42 hrs/3 cred |
| Accounting Fundamentals | Learn the basics of double-entry bookkeeping, as well as how to analyze and record financial transactions. Get hands-on experience with handling accounts receivable, accounts payable, payroll procedures, sales taxes, and various common banking activities. We'll cover all the bases, from writing checks to preparing an income statement and closing out accounts at the end of each fiscal period. Whether you're a sole proprietor looking to manage your business finances or you simply want to gain an understanding of accounting basics for career advancement or for personal use, this course will give you a solid foundation in financial matters. Please note: this course contains U.S. content. | 24 hrs/1 cred |
| Accounting Basics II | This course covers topics such as capital assets, corporations' shareholders' equity, and bonds payable. Preparation of the Statements of Retained Earnings and Cash flows will also be covered. Students will expand their knowledge of the role financial statement users by studying financial statement analysis. | 42 hrs/3 cred |
| Accounting Fundamentals II | This course builds on the knowledge learned in Accounting Fundamentals. It explores special journals, uncollectible accounts receivable, plant assets, depreciation, notes and interest, accrued revenue and expenses, dividends, retained earnings, and various financial reports for corporations. NOTE: This course contains U.S. content. | 24 hrs/1 cred |
| Mathematics for Business | The course provides students with a mathematical basis for personal and business financial decisions through four instructional modules. The course stresses business applications using arithmetic, algebra, ratio-proportion and graphing. Applications include payroll, cost-volume-profit analysis and merchandising mathematics. This course stresses logical reasoning and problem-solving skills. A Texas Instrument BAII "Plus" calculator is required for the course. | 56 hrs/4 cred |

## Problem-Solving

Problem solving is the act of identifying, analyzing, proposing solutions, and making decisions. Such a skill plays a critical role in addressing issues, monitoring success and learning from past experiences. Over 25% of St. Jacobs' job posting were looking for someone who had strong problem-solving skills. Problem solving skills were demanded most in occupations related to Natural and applied sciences, as well as Trades, transport and equipment operations. Key problem-solving skills that St. Jacobs employers were seeking included: 1) analytical and critical thinking skills (including risk assessment); and 2) ability to identify potential problems and provide corrective or preventative solutions. Conestoga Colleges continuing education options for developing problem-solving skills are presented below (Table 8).

*Table 8. Continuing education options at Conestoga College aimed to develop workers' problem-solving skills.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential** | | |
| Inclusive Leadership Practices | Examine the theories, models, and practices of inclusive leadership required in contemporary workplaces. Students will define their own leadership philosophy through examining their personal values, beliefs, and attitudes. They will learn leadership strategies for effectively managing and leading organizational change, as well as focus on leadership practices that can build a positive and inclusive organizational culture. Students will engage in reflective practice in support of building the leadership skills that are necessary to create a diverse, effective, and inclusive environment in 21st century workplaces. | 3 courses 126 hrs/9 cred |
| Creative and Critical Thinking (Leadership Development Series) | Today more than ever, leaders need to be creative and critical thinkers in order to deal with all aspects of organizational, strategic, and societal situations or environments. Learn how to think creatively and critically and apply those skills to both professional and personal situations. For leaders, fine-tuning your creative and critical thinking skills will assist you in strategic planning, decision-making, and problem solving. | 30 hrs/2 cred |
| Learning, Thinking and Problem Solving | After a brief historical overview, this course examines psychology as a science. Psychological research and theory making facilitates our understanding of ourselves as individuals and as members of social groups by describing, explaining, and predicting how we develop and relate in society, how we create ourselves and our world; applied psychology makes its contribution through efforts to enhance individual development and adaptation within society. Students benefit by gaining an introductory knowledge of psychology that can be applied to their daily lives. | 42 hrs/3 cred |

## Reading

Reading is the ability to find, understand, and use information presented through words, symbols, and images. This skill is used when locating information on forms and drawings, and reading items such as emails, reports, news articles, blog posts, and instructions. Despite the importance of reading, only two listings were explicitly looking for candidates who possessed this skill. Perhaps, there was an underlying assumption that the those reviewing job listings already had the ability to read. Employers in trades and manufacturing were specifically seeking individuals who can read and comprehend drawings and specifications, and seeking those who were adept in reading, analyzing, communicating and processing documents. Conestoga College offers three continuing education courses designed to improve reading skills (Table 9).

*Table 9. Continuing education options at Conestoga College aimed to develop reading skills.*

| Continuing Education Course | Learning outcomes | Duration |
|---|---|---|
| Canadian Literature | This course will allow students to read selected Canadian literature, including novels and short stories, and to analyze and discuss various key points of each piece of literature. Students will identify the different types of audiences intended for each literary piece. Some suggested areas of study for each novel will include selected key literary terms as well as discussion of the relevance of setting and plot in relation to Canadian culture and history. This course will focus on both reading literature as well as the use of proper written English. The novels chosen will also be explored in relation to their relevance to Canadian culture. Key literary terms and events will be discussed for each novel, including questions for each literary piece. | 42 hrs/3 cred |
| Read, Set, Read! | In this course, learn how a child becomes literate from the moment of birth. Investigate the many things a child's growing mind must do to make sense of the written word and create writing. Explore the development of reading and writing from infancy to the early school years. Discover what problems to look for and how to assist a struggling reader. | 24 hrs/1 cred |
| Speed Reading | This course is a complete speed-reading experience. Save yourself hours of time and increase productivity by learning to read faster and with better comprehension. Learn to master the skills and techniques needed for lasting proficiency as a speed-reader. | 24 hrs/1 cred |

## Writing

Strong and effective written communicators were desired in almost a third of job listings identified in St. Jacobs. ESDC defines writing skills as the ability share information using written words, symbols, and images such as filling out forms and applications, and writing emails, reports, and social media posts. Writing was a desired skill in occupations related to Business, finance and administration, Natural and applied sciences, and health. Table 10 highlights key courses at Conestoga College that aim to improve writing skills.

*Table 10. Continuing education options at Conestoga College aimed to develop writing skills.*

| Continuing Education | Learning outcomes | Duration |
|---|---|---|
| **Micro-credential** | | |
| Accurate Keyboarding | In the fully online Accurate Keyboarding micro-credential, you will use a web-based software program to practice proper keyboarding techniques with a focus on developing speed, technique, posture, and maintaining elevated levels of accuracy. You will develop and apply touch typing skills to produce a variety of business-related correspondence including emails, memos, and business letters. | 3 courses 84 hrs/6 cred |
| **Course** | | |
| Advanced Keyboarding | Students in this course will master the keyboard with an emphasis on technique, speed, and accuracy. Using a web-based software program, students will practice proper keyboarding techniques. Preparation of common business documents, dictation exercises, and timed keyboarding tests will be used to develop keyboarding skills. Upon successful completion of the course, students will demonstrate the ability to keyboard with 98% accuracy, with a speed goal of 50 wpm. | 14 hrs/ 1 cred |
| Business Communication and Technical Writing | The course is designed to teach students business communications and technical writing skills. Emphasis is placed on analyzing audience, determining purpose, and ordering ideas effectively for various written communications such as letters, memoranda, meeting agenda and minutes, and technical and business reports in the trade environment. As well, all students are expected to participate in group work throughout the semester and are expected to give oral presentations. Students will also learn how to deal with customer service in a construction environment. The course material is focused to most administrative, supervisory and managerial positions. | 42 hrs/3 cred |
| Business Report Writing | In this course, learn how to structure written reports from memos to formal presentations in a way that is precise, clear, and easy to read. Master reports through a series of assignments ranging from simple memos to formal reports. Please note: a firm mastery of English and proficient writing skills are required to be successful in this course. | 42 hrs/3 cred |
| Writerrific: Creativity Training for Writers | In this course, learn a number of invaluable tricks from the published writer's toolbox. Whether you're at work now or hoping to write a novel, non-fiction book, memoir, short stories, or articles, this course liberates the imaginative, inventive bolts of genius that are inside everyone. | 21 hrs/1 cred |
| Effective Writing | In Canadian business environments, it is expected that communication is effective, persuasive, and ethical. This course will teach students how to plan, write, and revise business documents. Students will be introduced to various written business communication formats and the strategies behind their development. This course will help students develop critical thinking and analysis, research, writing, editing and presentation skills. | 42 hrs/3 cred |
| Keyboarding | This is a learn to type course, but also suitable for those wanting to improve their existing skills. Learn how to touch-type—to type text you read from a printed page or a computer screen without looking at your keyboard. By the end of the course, you'll know how to touch-type the alphabetic, numeric, and symbol keys; create, save, and edit word processing documents. | 24 hrs/1 cred |

# Technical Skills Specified in Job Postings

In addition to the skills for success, we identified 23 unique technical skills that employers sought for in their candidates. Employers can use table 9 to identify the relevant continuing education courses and micro-credentials for developing the necessary skill among their existing workforce and new hires. For ease of use, the table is arranged in alphabetical order.

*Table 11. Continuing education courses and micro credentials for technical skills demanded in St. Jacobs. Technical skills sorted alphabetically.*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Agile processes** | | |
| Agile Methodologies | Students examine multiple aspects of Agile methodologies with a focus on practices that have evolved since the creation of the Agile values and principles published in 2001. Students begin with an overview of the history of Agile methodologies in order to gain an understanding of where these practices originated and how they are being applied today. A variety of learning tools such as hands-on exercises and group collaboration as well as case studies that examine how organizations have applied Agile methodologies in different settings. | 21 hrs/2 cred |
| Agile Project Management | This course will prepare you to apply Agile concepts to manage projects. You will explore Agile values and principles along with how Lean has influenced Agile. Learn how to perform key agile functions such as user story creation, estimation, backlog and sprint planning, sprint execution and scrum, as well as, the use of information radiators to monitor sprint progress. Practical case scenarios will be utilized to teach the effective use of Jira software to manage many Agile functions. This course will be of interest to students who would like to pursue a career as a Scrum Master or become more familiar with Agile. | 42 hrs/3 cred |
| Fundamentals of Project Management - Waterfall and Agile | This introductory course is tailored to meet the needs of students who are new to project management, or who have not had formal project management training. Students will be introduced to the basic concepts of both the traditional Waterfall (plan driven) Project Management framework following Dave Barrett's Understanding Project Management - A Practical Guide, as well as the Agile Project Management (change driven) frameworks following PMI's® Agile Project Guide®. Students will be able to understand the benefits of both frameworks and compare the two, learning the practical application of each. After the successful completion of this course, students will be prepared to be introduced to more advanced concepts of project management for both Waterfall as well as Agile Project Management. | 42 hrs/3 cred |
| **Basic accounting** | | |
| Bookkeeping Essentials | Bookkeeping is vital to the success of businesses, organizations, and industry. Enter this dynamic field and take charge of your career prospects by expanding your skill sets! This online micro-credential is offered during evening hours and will provide you with the required skills to perform fundamental bookkeeping practices. You will acquire the necessary knowledge and skills to perform effectively in entry-level bookkeeping positions or manage your own business' bookkeeping. You will gain an essential understanding of financial accounting and payroll administration, as well as relevant software such as Sage50 and QuickBooks Online. If you wish to continue your studies, all three courses can be applied to the Bookkeeping certificate. | 3 courses |
| QuickBooks Essentials | Students will learn software features, helpful shortcuts, and useful tips. Students will create a company in a QuickBooks environment, including its chart of accounts and financial reports. Students will also learn how to prepare payroll data, process payroll transactions, set up and manage inventory, operate with multicurrency, customized forms, and using advanced reporting. Upon completion, students will be able to organize the accounting of their own small business or work efficiently as a supporting member of an accounting team in small or medium sized companies. | 3 courses |
| Accounting Basics I | This course examines how accounting information is used by, and meets the needs of, both internal and external users through effective and efficient communication as well as what accounting information is required by a business concern to clearly reflect the operating results of the enterprise over its operating life. Explore generally accepted accounting principles, the interpretation and preparation of financial statements, and how this information is recorded in various business records. | 42 hrs/3 cred |
| Accounting Basics II | In this course, students will expand their understanding of accounting principles and concepts while covering specific topics including capital assets, corporations' shareholders' equity, and bonds payable. Preparation of the Statements of Retained Earnings and Cash flows will also be covered. Students will expand their knowledge of the role financial statement users by studying financial statement analysis. | 42 hrs/3 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Basic accounting (cont.)** | | |
| Accounting Fundamentals | Learn the basics of double-entry bookkeeping, as well as how to analyze and record financial transactions. Get hands-on experience with handling accounts receivable, accounts payable, payroll procedures, sales taxes, and various common banking activities. We'll cover all the bases, from writing checks to preparing an income statement and closing out accounts at the end of each fiscal period. Whether you're a sole proprietor looking to manage your business finances or you simply want to gain an understanding of accounting basics for career advancement or for personal use, this course will give you a solid foundation in financial matters. Please note: this course contains U.S. content. | 24 hrs/1 cred |
| Accounting Fundamentals II | This course will build on the knowledge learned in Accounting Fundamentals. In this course, explore such topics as special journals, uncollectible accounts receivable, plant assets, depreciation, notes and interest, accrued revenue and expenses, dividends, retained earnings, and various financial reports for corporations. Please note: this course contains U.S. content. | 24 hrs/1 cred |
| Foundations of Accounting | This course introduces ASPE, IFRS, accounting terminology, the accounting equation, the double-entry system of bookkeeping, the accrual basis of accounting, financial statements and the ledgers and journals making up a basic accounting system for both sole proprietorship and corporation forms of businesses. | 42 hrs/3 cred |
| Foundations of Accounting II | This course introduces inventory merchandising transactions and valuation, accounting information systems, cash control, payroll accounting, and financial statement analysis. | 42 hrs/3 cred |
| Introduction to Accounting | This course introduces the non-accounting student to the subject of Accounting. It is designed to teach the student an essential life skill. The course focuses on the logic of accounting principles and relates it to the financial well being of the student. The student will learn a basic understanding of accounting that can be used in both their personal life and business career. This course introduces ASPE, IFRS, accounting terminology, the accounting equation, the double-entry system of bookkeeping, the accrual basis of accounting, financial statements and financial analysis and the ledgers and journals making up a basic accounting system for both sole proprietorship and corporation forms of businesses. | 42 hrs/3 cred |
| Introduction to Accounting Principles | This course provides business students with knowledge about financial and managerial accounting. Methodologies of financial measurement for decision making purposes will be studied. Students will also learn about accounting principles involved to the operation of a business. | 56 hrs/4 cred |
| **Best manufacturing practices** | | |
| Introduction to Quality Manufacturing | This micro-credential is aimed at applicant or incumbent front-line production workers in manufacturing facilities. The learning outcomes will provide the skills necessary to understand quality assurance tools specific to measurement, process capability, variation and statistical control. The courses in this micro-credential will be instructor led and completely online allowing participants the opportunity to work at their own pace from any location. The skills will be of value to production operators who wish to apply to other positions in a manufacturing environment such as quality control and inspection. The first course includes very introductory level math and statistics to give students a foundation to understand more complex Statistical Process Control (SPC) tools. Then it will develop skills in statistical analysis and decision making. The second course increases skill in statistical techniques used to evaluate quality and the analytical concepts used to evaluate various measurement systems. Topics include fundamentals in measurement error, gauge repeatability and reproducibility, process variation, capability and control. Courses in this micro-credential must be completed in the following sequence: STAT1020 followed by QUAL1410. Courses in this micro-credential can be applied to the Quality Assurance certificate program. | 2 courses |
| Manufacturing Applications | Learn to apply the principles and concepts of manufacturing. Discover the nature of strategy and learn how it leads to the development of manufacturing strategy. Understand the purpose of customer demand forecasting and find out what forecasting methods are suitable for which situations. Explore the nature of planning and learn how to effectively use Gantt charts and the precedence diagram method. Determine how purchasing, production and inventory control, and logistics support a manufacturing operation. Discover the basics of lean manufacturing and see how capacity management converts production plans into concrete products. Learn why manufacturing, industrial, and quality engineering are so essential to any firm. Understand the true meaning of productivity and how to improve it. In this six-week online course, you will learn how successful organizations effectively use master production scheduling (MPS), production activity control (PAC), material requirements planning (MRP), and inventory management. You'll also discover how the application of Six Sigma, and statistical process control (SPC) increase customer satisfaction, and you'll learn about the elements of a logistics system, including warehousing and receiving. | 24 hrs/1 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Best manufacturing practices (cont.)** | | |
| Manufacturing Fundamentals | Learn the basic skills required to work in the manufacturing field. Discover the role of production design, process planning, and the heart of 13 different manufacturing processes. Understand why facility location and plant layout decisions are so vital and learn how job design helps you accomplish company goals and achieve worker satisfaction. Find out what makes up the physical work environment and learn how to characterize different types of production materials. Master product development concepts such as the voice of the customer (VOC), quality function deployment (QFD), and failure mode and effects analysis (FMEA). Learn how performance measurements and standardization improve manufacturing operations. In this six-week, instructor-facilitated online course, you will learn how successful organizations use costs to communicate manufacturing progress and how to effectively develop short and long-term budgets. Also, you will discover how the application of technology turns an ordinary company into a high-performing organization. You will also find out how ISO 9000 and enterprise resource planning (ERP) make the most of a manufacturer's potential. | 24 hrs/1 cred |
| Manufacturing Purchasing | Purchasing within the context of a manufacturing organization has a unique set of knowledge, tools, methods, and skills required. When executed effectively purchasing can reduce risks, facilitate innovation, and improve overall value. Students will examine and apply the various approaches to purchasing within a manufacturing or industrial context. They will explore how to reduce total cost of ownership by applying best practices, for acquisition of everything from raw materials to M.R.O. to Capital equipment. In addition, they will address issues of Occupational Health & Safety, environmental impacts and regulations (WHMIS-GHS), as well as sustainability. This will require an understanding of manufacturing processes, technical language, interpretation of blueprints and industry specific standards, with required certifications or testing reports. | 42 hrs/3 cred |
| Principles of Manufacturing Operations | Understanding the factors that impact the effectiveness and efficiency of a process contributes significantly to the success of a manufacturing business. In this course the learners will be provided with an overview of key topics such as: Business, Leadership and Teamwork, Quality Concepts, Traceability, Statistical Process Control, Continuous Improvement, Preventative Maintenance, Lean Manufacturing, Sustainability and Environmental Impact. Through group exercises and practical data collection from a real life process, students apply theoretical concepts to calculate process parameters such as Overall Equipment Effectiveness and Cost per Unit. | 31 hrs/2 cred |
| **Commercial property management** | | |
| Building Maintenance for Property Managers | The purpose of this course is to provide an understanding of maintenance management services, for those involved in the property management sector or a related field. It will give a general overview of management systems, such as the principles of residential construction, building science(s), asset and risk management strategies, management's responsibility for the administration of life safety systems, contract management, and the impact of legislative requirements in day-to-day maintenance management. | 39 hrs/3 cred |
| Human Relations for Property Managers | Property Managers must develop analytical and behavioural skills related to supervision of employees. Also, they must also interact with tenants, owners, sub-contractors and the general public. Topics include decision making, leadership, delegation, team building, motivation, performance management, coaching, discipline, personnel procedures, recruitment, public relations, client/tenant services, owner/board liaison and business ethics. It is recommended that students take ADMN1320 Property and Building Administration course before registering into this course. | 39 hrs/3 cred |
| Property and Building Administration | This course provides insight into the functions of management in the administration of properties governed by the Residential Tenancies Act. Topics include lease negotiation, rent geared to income, breach of contract procedures, collection procedures, insurance and liability, management information systems, building start-up and take over and marketing/advertising of rental units. | 39 hrs/6 cred |
| Strategic and Financial Planning for Property Managers | This course is designed to provide a complete review of the accounting process and principles, the managerial use of accounting and financial statements and their analysis, and budget preparation procedures for property managers. In addition, the techniques and approaches for establishing and organizing objectives and implementing strategies will be discussed. It is recommended that students take an elective course Introductory Financial Accounting I (ACCT1030) before registering into Strategic and Financial Planning course if they don't have previous accounting experience and/or education. | 39 hrs/3 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Computer numerical control** | | |
| CNC Programming | The CNC programming micro-credential is geared towards students and professionals who have some experience with machining and engineering drawing experience. It is geared towards the programming aspect of Computerized Numerical Controls (CNC). Student will learn to write and optimize code for lathes and mills, gain hands-on experience through simulated runs of the programs, and develop an understanding of the complexities of the manufacturing process. This three-course micro-credential prepares participants for entry-level roles in CNC programming. | 3 courses |
| MasterCAM | MasterCAM is an industry-leading post-processing software used to control CNC machines. This micro-credential teaches students to create code for 2- and 3-dimensional tool path controls in 3- and 4-axis machining. Emphasis is placed on industry best practices and standards. | 3 courses |
| CNC Programming - Advanced | Recommended: CNC Programming Intermediate. Having successfully completed the Basic and Intermediate course levels of CNC Programming, the student would go on to study advanced programming techniques focusing on topics such as thread milling, multi-start threading with introduction to sub-programming and macro programming techniques for both Machining and Turning centres. | 42 hrs/3 cred |
| CNC Programming - Basic | Recommended: Knowledge of general machine shop practices, including clamping, cutting tools, speeds and feeds, blueprint reading and Grade 11 math. This introductory CNC course is designed for students interested in the general field of Computerized Numerical Control (CNC), who have some machining and engineering drawing interpretation experience. This course is aimed towards general machinists, machine operators, designers and engineers, production planners, CAD/CAM and other professionals, as well as quality technicians who want to understand and apply the complexities of this modern manufacturing process. The main topics will cover all general principles and requirements of CNC programming, from the basic elements to actual development of simple part programs for common machining operations. To gain hands on experience students will use tool path simulation software. | 42 hrs/3 cred |
| CNC Programming - Intermediate | Recommended: CNC Programming Basic or equivalent industrial experience with CNC machine tool operation and programming. This Intermediate CNC programming course has been developed for students who have a basic knowledge and/or some experience in programming or operating CNC machines. The main subjects covered in this course are fixed cycles in detail, contour programming (linear and circular interpolation), repetitive cuts, cutter radius offset, special calculations and subprogram development. Several concepts introduced in the Basic course will be reinforced, and many new subjects will be introduced for CNC machining centres. | 42 hrs/3 cred |
| **Customer relationship management** | | |
| Customer Experience | Gain the tools and strategies to meet customer needs, build enduring relationships, and provide an optimal customer experience through this short three course fully online program. Expertise in customer experience will help you develop a returning customer base and gain new customers from referrals. Courses in this micro-credential can be applied to the Client Relations certificate program. | 3 courses |
| Building and Maintaining Customer Relationships | In this course, students develop an understanding of customer service and the skills associated with understanding the needs of customers, meeting those needs, and fostering an environment that encourages customers to return. | 48 hrs/3 cred |
| Customer Relationship Management | Students will examine the practices, strategies and technologies that companies use to manage and analyze customer interactions and data. Students will learn to use these tools to improve business relationships with customers, assist in customer retention and drive sales growth. | 42 hrs/3 cred |
| Customer Relationship Management and Selling | This course provides students with the essential skills required to be a sales professional in a Business-to-Business (B2B) environment. The course will explore computer and communication technologies as they apply to business-to-business selling and will provide an introduction to the use of customer relationship management (CRM) and web selling. Students will develop their skills by creating a detailed step-by-step sale simulation of a product or service using a consultative approach and creating a win-win environment for both the prospect and the seller delivered via YouTube. | 42 hrs/3 cred |
| Demand and Customer Relationship Management | Demand Management (DM) and Customer Relationship Management (CRM) complement each other. DM is a business process included in Sales and Operations Planning (S&OP), or Integrated Business Planning (IBP). It involves forecasting, planning and managing the aggregate demand for a company's products and services. On the other hand, CRM focuses on building and maintaining profitable relationships with individual customers. An effective CRM process can assist an organization to increase market share, profit and customer satisfaction and help combat competitive pressure. This course explores DM and CRM as a key strategic process within all organizations and a vital aspect of any successful supply chain, whether the relationship is business to consumer (B2C) or business to business (B2B). Students will gain experience in demand forecasting, use CRM technology and apply CRM fundamentals within the context of case studies related to multinational companies. | 56 hrs/4 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Customs knowledge** | | |
| International Business | Globalization is one of the key issues facing businesses. This course will provide the student with a basic understanding of why all countries and companies have a vested interest in ensuring they are ready and able to understand and manage global, cultural, and transnational issues. Managers must be able to ensure that their organizations are able to compete in an increasingly complex global arena. Areas of study include international trade agreements, trade organizations, and their impacts on countries, environment and culture. | 42 hrs/3 cred |
| **Data management, governance, and quality control** | | |
| Data Analyst | This micro-credential is aimed at participants that wish to better gather and interpret the massive amounts of data that companies collect. The learning outcomes will provide the skills necessary to collect, clean, identify, and visualize the large amounts of data and interpret its value to help make better business decisions. The courses in this micro-credential will teach the participant how to best collect the needed data, organize and search through the data based on needs, and finally turn the data into visual output that is easily interpreted by stakeholders. | 3 courses |
| Analytics and Data Management | Students will engage in data analytics and data visualization. Student will gain hands-on experience with Microsoft Power BI. Students will also explore software services, apps and connectors that work together to create graphical, interactive dashboards and reports that visually share data. | 42 hrs/3 cred |
| Big Data Analytic Tools | Students are introduced to popular Big Data tools such as the Hadoop framework and NoSQL databases. Students learn the basic concepts of MapReduce and Python scripting. Through various exercises, students explore widely used software for Big Data like Hive, Pig, and Spark. | 42 hrs/3 cred |
| Data Analysis and Advanced Functions | Student will learn and apply more advanced features of spreadsheet applications in order to develop solutions to business problems; and utilize advanced database functions and business intelligence tools of a spreadsheet to enable an executive to make informed decisions. | 42 hrs/3 cred |
| Data Analysis with Excel | In business today, it is very important to be able to answer the "What if" and "what does that look like" questions that come up when dealing with all of the data that is collected. Microsoft Excel® has a group of tools that will allow you to answer those questions and many more. Students will learn to organize and visually transform data to better inform stakeholders when making key business decisions. | 30 hrs/2 cred |
| Data Analytics and Information Systems | This course provides an introduction to business analytics and data visualization with an emphasis on data-driven decision making. The course will cover the concepts, processes, and methodologies used to manage organizational data and the methodologies to transform high quality data into information within the context of multiple areas of study. | 56 hrs/4 cred |
| Database Design for Information Workers | Examine relational databases and their role in library and information work. Learn to create a database, enter and edit records, search for information, and create simple reports. | 21 hrs/2 cred |
| Database Management | Students will gain experience with a variety of database management software systems that may be used in a business setting. Software features will be explored to create and maintain; tables, queries, forms and reports. | 21 hrs/2 cred |
| Designing, Implementing, & Managing a GIS Database | Examine the fundamental and integrational aspects of designing, managing, and implementing a Geographical Information System. Apply skills such as Information Technology expertise, research, procurement, and project management. Examine data providers and data management, requests for proposal, system life cycles, benchmarking, general practices of project management, and various standards for spatial data. | 42 hrs/3 cred |
| Human Resources Data Analytics | This course continues from the Data Analytics and Financial Management I course. The fundaments in the level one course will be enhanced and further developed. As well, this course focuses on the role of audits in the HR function. | 42 hrs/3 cred |
| Introduction to Metadata and Metadata Applications | In this course, learn to apply metadata schemes and standards to describe digital and electronic web resources. | 42 hrs/3 cred |
| MySQL Databases | Focus is on creation, modification, implementation, and maintenance of MySQL and MSSQL databases, as well as how these databases interface with internet applications and database servers. Please note: this course does not support MAC users. | 42 hrs/3 cred |
| Relational Database Management Systems | Explore building data models, normalization, and querying a database to benefit GIS. Work with spatial data that is stored in a relational database management system and build on storage techniques using relational databases (non-spatial) and spatially enabled databases (geodatabases). Learn to navigate security, administration, and the beginnings of enterprise driven data management. | 24 hrs/3 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Data management, governance, and quality control (cont.)** | | |
| Spatial Database Management and Integration | Expand on skills learned from Introduction to Relational Database Management Systems (RDBMS) to understand large scale enterprise integration of spatially enabled databases to secure administer, and set rules for data that has a spatial component. Use spatial measurements, functions, and indexes to process points, lines, and polygons. Develop and integrate a Spatial Database Management System (SDBMS) and deploy the database for multiple user access and editing. The course will culminate in students developing an enterprise GIS data model and make use of efficient data processing strategies. | 42 hrs/3 cred |
| SQL for Data Analysis | In data analysis, SQL (Structured Query Language) is one of the most valuable tools used to gathering, organize, and present data as valuable information to the end-user. Students will work with relational databases to write simple and complex SQL statements to pull the needed data to generate valuable output needed for decision-making. | 30 hrs/2 cred |
| **Electrical troubleshooting** | | |
| Basic Electrical Theory and Motor Controls | This course covers electrical units, Ohm's Law, circuits, magnetism and electromagnetism, relays and contactors as it relates to multi-skilling of trades and related workers. Fundamentals of AC/DC and an overview of transformer principles will be covered. The course will also introduce the students to Electric Motor Controls. | 60 hrs/4 cred |
| Electrical Inspection | This course prepares students to inspect the performance of the following components of electrical systems within residential buildings: service drops, grounding systems, service panels, wiring systems, devices and fixtures. | 42 hrs/3 cred |
| **Healthcare legislation** | | |
| Occupational Health and Safety Essentials | Are you interested in joining the rapidly expanding field of occupational health and safety? This 3 course micro-credential introduces aspiring leaders and professionals to health and safety practices such as hazard identification, legislation, and related administrative procedures. Courses run online and during evening hours to fit your busy schedule. If you wish to continue your studies, all three courses can be applied to the Occupational Health and Safety certificate program. | 2 courses |
| Legislation for Health and Safety | Understanding the various jurisdictions is foundational to occupational health and safety. Students learn to locate specific legislation, the interface between the statutes, regulations, codes, and standards. The obligations of employers and of employees is discussed, as is the Workplace Safety and Insurance Act and Regulations, filing claims, entitlement decision making, benefits, appeals, and re-employment. | 45 hrs/3 cred |
| Occupational Health and Safety Legislation | This course provides an overview and interpretation of relevant and increasing Health and Safety Legislation. Students will be able to identify and compare the legislated responsibilities of employers, supervisors and workers. There will be a review and application of the Occupational Health and Safety Act, Industrial Regulations, Designated Substance Regulations and WHMIS Regulations (Global Harmonized System (GHS). | 42 hrs/3 cred |
| **Inventory control** | | |
| Sterile Storage, Inventory Control and Management of Resources | This course introduces students to sterile storage, inventory control, distribution systems including the case care system, portering, and stock rotation. NOTE: Final exam must be proctored. | 35 hrs/2 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Knowledge of community resources and marginalized groups** | | |
| Community Care Nursing Skills | This micro-credential will support registered nurses and registered practical nurses in acquiring additional knowledge and skills to support work in community and home healthcare settings. You will learn from experienced nursing faculty in active learning environments such as state-of-the-art nursing laboratories, or through online learning platforms. Specific subject areas include starting intravenous lines, venipuncture, central venous lines, and wound care practices. Emphasis is placed on nursing assessment, intervention, and care planning. Nursing students in final semesters of their program can enroll in courses. | 3 courses |
| Anti-Racism, Discrimination, and Equity | Students taking this course will learn the definition of racism and discrimination and will be able to identify the various sources of discrimination and racism resulting from cultural values and physical differences between individuals. By identifying racism and discrimination issues in North American society, students will learn how to analyze the sociological factors that cause bias and prejudice to surface in our society. The main objective of this course is to enhance sensitivity to and intolerance of mistreatment based on racial or ethnic background and appearance, and to consider how to handle these issues as professional individuals in a pluralistic Canadian society. As part of the course, students will communicate with one another through electronic discussion and learn to appreciate through various readings and assignments the many facets of racism and discrimination. This course will be of interest to workers in health services, education, human resources, and business as well as those people who want to enhance their knowledge and sensitivity to issues of racism and discrimination particularly when communicating with people from other cultures or with physical appearances that differ from their own. | 42 hrs/3 cred |
| Community Services and Supports in Addictions and Mental Health | Access to mental health and addictions services can be challenging due to the complexity of the system of service, funding sources and issues relating to stigma and barriers. In this course, students learn about the current issues, trends and developments in the integration of services in order to promote coordinated, efficient access to services focusing on early intervention, treatment and community supports. Students explore a range of services for children, youth, adults, older adults and individuals with special needs. Workplace issues and supports are discussed. | 42 hrs/3 cred |
| Equity, Diversity, and Inclusion | The career professional plays a major role in assisting members of diverse populations to establish career plans and obtain satisfying work. Students will be introduced to how employment fits into the settlement/integration continuum and general characteristics of the process that in the long term, allows newcomers to be full participants in all dimensions of society. A community development approach to providing services is explored involving initial settlement concerns, language instruction, specific employment services and long-term integration issues. Contemporary issues related to race, gender, socioeconomic status, sexual orientation, religion, ability, age, nationality and ethnicity will also be explored in this course. | 42 hrs/3 cred |
| Equity, Diversity, and Inclusion in Post-Secondary Education | This course discusses the diversity of the student and faculty body in post-secondary education and provides a foundational exploration of topics such as culture, race, gender, sexuality, and socio-economic status. Participants will explore and reflect on ways in which teaching practices may be enhanced to acknowledge and meet the needs of the diverse students | 6 hrs/1 cred |
| Field Placement (Management in Community Services) | With a view to expanding the student's understanding, this field placement experience will provide students with an opportunity to gain practical work experience in the Community and Social Services sector. Working as part of an organization's team, students will have the opportunity to gain practical knowledge and develop professional practice competence and leadership capacity by contributing to the varied activities of a community service organization. Through guided discussion and reflective strategies, students will integrate the knowledge accumulated throughout the program to create an intentional professional development plan to prepare them for future practice as a manager in the Community and Social Service sector. | 170 hrs/6 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Marketing** | | |
| Business-to-Business Sales Skills | The Business-to-Business Sales Skills micro-credential will provide you with the fundamentals of three key areas essential to the modern salesperson. You will learn the sales process in depth – from prospecting to closing, managing key strategic accounts, and will gain practical experience with customer relationship management (CRM) software. Enter one of Canada's top 7 most in-demand, future-proof jobs in the sales profession! If you wish to continue your studies, all three courses can be applied to Conestoga's Business Development & Sales graduate certificate. | 3 courses |
| Customer Experience | Stand out from the crowd in your service organization by focusing on your customer's experience. Gain the tools and strategies to meet customer needs, build enduring relationships, and provide an optimal customer experience through this short three course fully online program. Expertise in customer experience will help you develop a returning customer base and gain new customers from referrals. Courses in this micro-credential can be applied to the Client Relations certificate program. | 3 courses |
| Digital Marketing | Get your company or event noticed by developing your internet marketing skills. Digital marketing is ubiquitous in today's successful business strategies. This micro-credential will guide you through formulating an integrated marketing strategy and using a variety of web-based and digital marketing approaches. You will also learn how to transition traditional marketing principles for the internet. Courses in this micro-credential can be applied to the Marketing Fundamentals Ontario College certificate program. | 3 courses |
| Sales Technology Skills | Sales is no longer a "soft skill-only" type of career. The best salespeople are proficient in technical applications like customer relationship management (CRM) software, Microsoft Excel, Forecasting, and other sales enablement technologies. Complete this fully online micro-credential and learn the current technical skills required to join one of Canada's top 7 most in-demand, future-proof jobs in the sales profession. If you wish to continue your studies, both courses can be applied to the Business Development & Sales graduate certificate. | 2 courses |
| Sales/Marketing | Advance your career by developing your marketing and sales skills! In a competitive business market, companies are looking for individuals that can drive growth and forge strong customer connections. You will learn about sales techniques, customer relationship management and marketing approaches including social media marketing. Courses in this micro-credential can be applied to the Marketing Fundamentals Ontario College certificate program. | 3 courses |
| Social Media Essentials for Business | In this introductory micro-credential, you will gain a solid understanding of the commonly used social media platforms as well as a foundational knowledge of today's digital marketing space. Through real-world business examples, you will evaluate and assess market needs and learn how to effectively create measurable objectives. You will gain comprehensive knowledge on how to best leverage relevant social media platforms and utilize practical tools to create marketing plans that will meet business objectives. These courses are taught at the graduate certificate level. To be successful in this micro-credential it is strongly recommended you already hold a two- or three-year college diploma or university degree from an accredited college or university OR have significant relevant work experience in the area of marketing communications. | 2 courses |
| Business and Marketing Writing | Using clear explanations, real-life examples, and an animated style, the course solidifies the relationship between business, marketing principles, and written communications. Learn how business and marketing objectives affect writing choices. You'll get practical writing instruction in grammar, clarity, structure and more. Explore issues unique to this discipline, such as buzzwords, working with a team, and marketing ethics. This course will help you understand the power of writing and use it to present a solid, cohesive message to your target audience. | 24 hrs/1 cred |
| Business-to-Business Marketing | In this course, students will focus on applying the core principles of marketing to the business-to-business environment. This includes the marketing of products to companies for use in the production of other goods, for use in general business operations or for resale to other consumers. Students will learn how B2B differs from B2C and how to successfully market to this demanding audience. | 42 hrs/3 cred |
| Channel and Retail Marketing | This course focuses on the application of channel and retail marketing strategies to successfully develop and optimize organizational distribution systems. The student will use the key principles of channel design and implementation, end-user analysis, and retail merchandising to create channel and retail distribution strategies to enhance business marketing initiatives. | 42 hrs/3 cred |
| Digital Marketing | This course introduces students to digital marketing approaches through social media, website content development, and automation. Learn to plan, create, and execute a digital strategy while leveraging their own design capabilities, organic SEO approaches, and appropriate online platforms, along with the tools, insights, and outreach they offer | 42 hrs/3 cred |
| Digital Marketing Channels | Digital Marketing has allowed today's marketing professionals to electronically market to customers in cost effective and personalized fashion. This course provides an overview of what tools Digital Marketers today are using and what results they are seeing with their online initiatives. Students examine various conversion points that brands need consumers to make and discuss various digital tools that can aid in those conversions. | 42 hrs/3 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Marketing (cont.)** | | |
| Integrated Marketing Communications I | This course will introduce key marketing concepts related to the promotions mix in an IMC (Integrated Marketing Communications) framework. Students will be introduced to the foundation of IMC and communication concepts specifically as they relate to influencing consumer behaviour. This course focuses on advertising as part of the promotional mix and explores creative approaches and media alternatives, including the internet and social media options, needed to prepare and justify different marketing communication approaches to create brand interest and ultimately brand loyalty. The advantages, pricing, and measurements of different types of media will also be explored. | 56 hrs/4 cred |
| Integrated Marketing Communications II | In this course, students will build upon and expand their knowledge in the areas of sales promotion, public relations, direct marketing, internet, and interactive media. In addition, students will develop a fully integrated marketing communication solution for a modern business problem. | 42 hrs/3 cred |
| Library Programming, Marketing, and Advocacy | In this course, examine vital client service skills including program planning, outreach, public relations, marketing, and partnerships. | 42 hrs/3 cred |
| Marketing a Trades Business | This course provides an overview of marketing theory before engaging students directly in practical exercises on how to improve a trades business though proven marketing strategy. Learn how service marketing in a trades business differs from traditional product marketing, and the enormous impact that the individual's personal brand has on the company. The importance of networking and referrals will be emphasized. Students will also consider various messaging and media options that resonate best with trades customers. | 42 hrs/3 cred |
| Marketing and Communications for Office Professionals | This course will introduce students to marketing and business communication methods frequently used by business professionals. Topics will include effective written communication, integrated marketing communication principles and strategies, customer service skills, communication via a variety of media including internet and social media, and the production of professional development documents. Students will explore concepts, techniques, and models in marketing and business communication using real world examples. | 42 hrs/3 cred |
| Marketing for Supply Chain Management | Students will learn the basics of marketing beginning with an examination of what constitutes marketing and how new marketing opportunities are identified. Students investigate key concepts related to supply chain management including the importance of the cross-functional relationship between marketing and supply chain to meet customer needs. Students learn how to segment markets, develop positioning strategies, and prepare basic marketing plans involving product or service issues, pricing, distribution and communications strategies. Environmental analysis is stressed throughout the course, as is the role of technology and strategic planning as they relate to supply chain management. | 42 hrs/3 cred |
| Marketing I | In this course, emphasis is placed on the formulation of integrated marketing strategies that play a role in achieving organizational objectives. Marketing process and marketing environments; marketing planning and information collection processes; buyer behaviour and targeting strategies; and marketing mix will be examined. | 45 hrs/3 cred |
| Marketing II | In this course, emphasis is placed on the formulation of integrated marketing strategies that play a role in achieving organizational objectives. Price strategy and management; distribution management; marketing communications; and emerging directions in marketing are examined. | 45 hrs/3 cred |
| Marketing in a Digital World | In this introductory course, learners explore both the foundations of traditional marketing as well as the fundamentals of the Digital Marketing Space. Students review the concepts of market segmentation, gain knowledge of the media available to marketers today, study consumer behaviour and analyze campaigns in market that are working well. | 42 hrs/3 cred |
| Marketing Law and Ethics | Advertising law in Canada is governed by federal and provincial laws as well as self-regulatory codes, policies and bodies. Marketers who advertise their products and services in Canada need to understand this complex legal and regulatory environment and its impact on their marketing and advertising practices in all media. This course will familiarize you with the shifting landscape, rules, laws, and risks facing organizations in their communications with the consumer. | 42 hrs/3 cred |
| Marketing Presentation Skills | This course applies principles of effective oral presentations to a marketing setting. Students will be enhancing their skills in the planning, preparing, and delivery of effective marketing presentations to a variety of audiences using a variety of media. | 42 hrs/3 cred |
| Marketing Research Techniques | This course is designed to use a hands-on orientation in identifying and evaluating business marketing solutions through the examination of several research techniques and applications. The student will use the key principles of problem statement creation, experimental research, and the questionnaire design process to develop actionable research solutions to help solve modern marketing problems. | 42 hrs/3 cred |
| Marketing Your Business on the Internet | In this course, discover proven methods that will help you establish an internet presence and build an online brand identity. Learn how search engine optimization (SEO) works and how to track your site's performance using web analytics. Explore how to use online advertising, email marketing, and social media (including blogs) to drive business to your website. | 24 hrs/1 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Marketing (cont.)** | | |
| Marketing Your Nonprofit | This course will show you how to use powerful marketing techniques to compete more effectively for customers, donors, members, and volunteers. Learn how to persuade the media to communicate your organization's message and further its ideals and goals. Discover how to improve your market share by learning to evaluate and implement effective promotions, advertising campaigns, and communication techniques. | 24 hrs/1 cred |
| Online Marketing | Websites are a key hub in any online strategy. In this course, you will design a website using industry standard software and utilize Search Engine Optimization (SEO) to improve your ability to reach customers effectively. You will learn design practices to ensure your website is driving towards your business's goals and objectives. You will also learn how to track interactions with customers using buzz monitoring tools such as Google Analytics. | 42 hrs/3 cred |
| Sales and Marketing (Retirement Communities) | This course introduces the student to consumer-based services marketing and sales as applied to the Long Term Care and Retirement Communities industry. Students will define marketing and demonstrate an understanding of consumer behaviour, market segmentation, the marketing mix, application to the marketing plan, and the principles of selling. | 42 hrs/3 cred |
| Small Business Marketing on a Shoestring | In this course, learn how to use the same marketing tricks that big companies employ, without making a big dent in your wallet. Master cost-effective strategies, including strategic partnerships, local marketing, search engine optimization, social networking, email marketing, lead generation, and niche marketing. Upon course completion, you'll have a personalized plan of action for increasing your sales on a shoestring budget. | 24 hrs/1 cred |
| Social Media Marketing | In this course you will be provided with a fundamental understanding of many of the different social media channels including the use of mobile apps and games for social media marketing. Once an understanding of the social media channels is established you will learn how to leverage the channels to engage audiences, and integrate with traditional media, in order to achieve marketing objectives. | 45 hrs/3 cred |
| **Project management** | | |
| Agile Project Management | This course will prepare you to apply Agile concepts to manage projects. You will explore Agile values and principles along with how Lean has influenced Agile. Learn how to perform key agile functions such as user story creation, estimation, backlog and sprint planning, sprint execution and scrum, as well as, the use of information radiators to monitor sprint progress. Practical case scenarios will be utilized to teach the effective use of Jira software to manage many Agile functions. This course will be of interest to students who would like to pursue a career as a Scrum Master or become more familiar with Agile. | 42 hrs/3 cred |
| Fundamentals of Project Management - Waterfall and Agile | This introductory course is tailored to meet the needs of students who are new to project management, or who have not had formal project management training. Students will be introduced to the basic concepts of both the traditional Waterfall (plan driven) Project Management framework following Dave Barrett's Understanding Project Management - A Practical Guide, as well as the Agile Project Management (change driven) frameworks following PMI's® Agile Project Guide®. Students will be able to understand the benefits of both frameworks and compare the two, learning the practical application of each. After the successful completion of this course, students will be prepared to be introduced to more advanced concepts of project management for both Waterfall as well as Agile Project Management. | 42 hrs/3 cred |
| High Speed Project Management | The smart project manager must rapidly retool their skill set. This on-line course offers a breakthrough model for dealing with the realities of managing projects at supersonic speeds. Learn to meet and win the challenges of truncated timelines, short-staffed project teams, skimpy budgets and crippling risks. | 24 hrs/1 cred |
| Introduction to Project Management | This course provides the practical knowledge to prepare for starting and completing a project successfully. It will cover the components and tasks related to complex projects that often involve multiple functional teams and departments. You will explore how the knowledge areas of the Project Management Body of Knowledge (PMBOK® Guide) are applied during each phase of a project's life cycle as well as the processes related to successful project management. An overview of status reporting and the use of MS Project will be covered. This knowledge will help establish priorities and effectively manage your projects. It will be of particular interest to those students who have a long-term goal of attaining the Project Management Professional (PMP)® designation certified by the Project Management Institute. | 42 hrs/3 cred |
| Leadership in Project Management | This course addresses essential leadership skills such as: human resource management, communication management and leadership styles and skills in project management. Students will learn skills and techniques of organizational planning, staff acquisition, team development, team motivation and evaluation, conflict resolution, negotiations, effective communication and personal productivity skills. | 42 hrs/3 cred |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Project management (cont.)** | | |
| Major Project in Construction Project Management | This course is designed as a capstone project to enable students to apply and synthesize the material learned in other courses. Working in a team, students will select a project, submit a project proposal, and prepare a detailed project report and present their finding in a professional jury setting to external and internal examiners. In this course students assume consultant's and contractor's roles. In consultant's role students prepare detailed market, technical and financial analysis, site selection and site feasibility study, project design, preliminary cost estimate, value engineering and life cycle costing, bid document, bid invitation, and simulated bid award. In the contractor's role students prepare detailed quantity takeoff, cost estimate, site layout, project schedule, resource plan, risk plan, quality plan, procurement plan, construction health and safety plan, communication plan, stakeholder plan. The project type will engage all the lessons learned in the course of study, including co-op, therefore, Enrollment in this course is limited to students who are in their final semester of the program. | 56 hrs/4 cred |
| Project Management Fundamentals | This course, taught by an experienced Project Management Professional, will help you master the essentials of project management. Learn about project politics and ethics, project measurements, and project closure. By the end of the course, you'll be able to develop all sections of a project plan, be comfortable with the project management body of knowledge, and have developed a variety of powerful techniques to generate project ideas. | 24 hrs/1 cred |
| Project Management | This course is intend to guide a student through the proven systematic system of project management. This will aid the student to understand, analyze, and manage the complexity of steel structure project and demonstrate this knowledge in the real world of the steel construction industry projects. Students will be able to recognize, illustrate and employ the 10 knowledge areas and its associated 5 process group of project management system using the PMBOK as a guide. | 42 hrs/3 cred |
| Project Management - Applied Project | This course will include the first phase of an extensive Project Management initiative. A comprehensive business case outlining a business focused project to be implemented will be developed and evaluated. | 42 hrs/3 cred |
| Project Management - Capstone | This course prepares the learner to write the (PMI) ® Certified Associate in Project Management (CAPM) ® certification exam. This exam is a valuable entry-level certification for project practitioners. Designed for those with little or no project experience, the CAPM® demonstrates your understanding of the fundamental knowledge, terminology and processes of effective project management. | 42 hrs/3 cred |
| Project Management Fundamentals II | Are you a part-time or accidental project manager? Part-time project managers have projects assigned to them in addition to their daily responsibilities. Accidental project managers find themselves leading projects without formal training in the discipline. Some people choose project management as a career, and many others find project management just another part of your area of responsibilities. For you, project management is a skill set, not a career. If you've been assigned projects and need a quick jump start to get going, then this is the course for you. You'll learn the 10 essential skills you need to survive and thrive. Topics include understanding the business need and the related project outcomes, setting project boundaries so you know what's included and what's not, getting to know your project stakeholders and their needs so you can set and meet their expectations, and how to plan projects and create a schedule. We'll also talk about how to manage projects once the project's execution phase begins. This includes understanding reporting project progress and how to anticipate and handle problems as they arise. It's not enough to just manage a project, you also have to control it so things don't get out of hand. Eventually, the project will come to an end, so you'll need to know what project closing looks like. You'll want to turn the project over to your customer so you can close down the project and move on to your next big adventure. Throughout the course, you'll find examples of real projects and how each of these essential skills applies in the real world. Project management skills are essential life skills with many practical applications and all industries. Project management and leadership are consistently the top two skill sets current and future employers look for, so this is also essential for your professional development. | 24 hrs/1 cred |
| Project Management Applications | In this course, taught by an experienced Project Management Professional, learn about the powerful tools and techniques that experienced project management professionals rely on daily. Increase the probability of project success by exploring Earned Value Performance Measurement, Gantt Charts, Network Scheduling, Work Breakdown Structure, and Cost-Volume Analysis. Become proficient at recruiting project team members and empowering them to succeed. Learn the stages of team development and gain skills in developing and motivating team leaders. Discover how to understand and relate to an organizational culture and the differing characteristics of its work groups. | 24 hrs/1 cred |
| Project Management for Course Design | Instructional design involves managing not only the design of curriculum in order to meet learning outcomes but also managing time requirements and other tangible and intangible resources. This course explores the important concepts in project management specifically for educational design and development. Time management and cost control, conducting a proper needs analysis from an institutional level as well as strategies for determining scope will be explored. | 45 hrs/3 cred |

Table 11. (cont.)

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Project management (cont.)** | | |
| Project Management Professional Preparation | This comprehensive online course will prepare you for the PMI's® prestigious Project Management Professional (PMP)® certification exam and what to expect after you complete it. You will learn about the eight project performance domains and what is new in the latest edition of the Project Management Body of Knowledge (PMBOK®). Expand your knowledge of important industry-related methodologies, including predictive and agile project management. Raise your project management IQ by exploring project management tools and techniques. Throughout the course, use proven learning strategies to help absorb key terminology, concepts, and processes while preparing for your online project management certificate. | 24 hrs/1 cred |
| Project Management Scheduling Software | Project management software increases the ability of the project manager to work more efficiently. The functions of project planning and scheduling, resource allocation and costing, progress monitoring, and reporting are explored in detail. Through the application of project software tools and techniques, students develop the skills required to manage successful projects. | 42 hrs/3 cred |
| Project Management, Applications, and Simulation | Using a case study method, this course enables students to work through a simulated mock project where various project management tools and techniques will be applied. Working in teams, students will initiate, plan, execute, control, and close the simulated project. Activities will include project planning, decision-making, problem-solving, and presenting project progress. | 36 hrs/3 cred |
| **Quality management systems** | | |
| Construction Quality Management | The main purpose of this course is to guide the student through the project quality management processes. Topics include quality planning, quality assurance, quality control, continuous quality improvement and integration of quality activities into project life cycle, tools and techniques of data collection, data analysis, statistical concepts and techniques in quality control and ISO 9000 series. | 42 hrs/3 cred |
| Project Contracting, Procurement, and Quality Management | Quality has become a primary component of competitive advantage and customer loyalty in the global economy. This applies to services as well as products. In the project management context, all work products must support the project throughout its life cycle. The scope of the project must be defined to include the quality standards of the project outputs, thus planning-in quality. Procurement and contracting are also major components of the global economy: from local contracting to offshore outsourcing and manufacturing, companies must be able to function in a highly distributed and increasingly competitive environment ensure their survival and success. | 36 hrs/3 cred |
| Total Quality Management | Recommended: QUAL1030 Fundamentals of Quality Assurance or equivalent. This course will focus on the philosophy and the guiding principles that represent the foundation of a continuously improving organization. In addition, students will study the quantitative methods and human resources to improve all the processes within an organization and exceed customer needs. | 25 hrs/3 cred |
| **Reporting skills** | | |
| Business Report Writing | In this course, learn how to structure written reports from memos to formal presentations in a way that is precise, clear, and easy to read. Master reports through a series of assignments ranging from simple memos to formal reports. Please note: a firm mastery of English and proficient writing skills are required to be successful in this course. | 42 hrs/3 cred |
| Environmental Site Assessment and Reporting | This course provides students with the understanding of the theory and practice of Environmental Assessment approaches that are the principal means of integrating environmental considerations into governmental decision-making. | 42 hrs/3 cred |
| Financial Reporting - Advanced Financial Accounting | This course focuses on advanced accounting topics related to consolidations, long term inter corporate investments, foreign exchange transactions, not for profit organizations, bankruptcy, and insolvencies. | 42 hrs/3 cred |
| Project and Technical Report Writing | Students will complete this course in their final semester of the program using the skills learned in this course and other courses within the program to plan and execute a major project, present their project, and submit a technical report. The project will be an extension of the concepts covered throughout the program, work experience and independent research, and will tackle relevant problems experienced in the built environment. Students are expected to apply their knowledge and provide workable solutions to case study projects, including addressing the technical, regulatory, social and economic elements of the issue. Students will learn how to create a detailed proposal identifying the scope of work, technical approach, project team, schedule, and budget. Students will learn how to communicate scientific and technical information concisely and accurately using appropriate formats and graphical support. Students will study technical communication theory/ practice and apply the knowledge to creating, critiquing, and presenting technical documents. The oral project presentation will emphasize clear and concise communication of technical details and the use of appropriate visual support for technical information. | 56 hrs/4 cred |

Table 11. (cont.)

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Reporting skills (cont.)** | | |
| Researching and Reporting | In this course, communication skills are developed through hands-on application. Students can use examples related to their careers. Students will define a problem; collect research using print sources, the Internet, interviews, and questionnaires; and present their findings in reports. | 42 hrs/3 cred |
| **Research skills** | | |
| Introduction to Research Design | Knowledge and skills involved in research are often required for academic and workplace progression and development. The course develops the learners' research literacy by introducing the learner to research concepts, methodologies and techniques used in business, health, engineering, community services, and media. The course examines historical, cultural and worldview (global) perspectives that underlie decisions about research. Participants will also address ethical responsibilities inherent in research processes and products. The goal of the course is to enable to identify and critically interpret research evidence to support their decision-making processes in the work environment and in one's day-to-day life. | 42 hrs/3 cred |
| Law Libraries and Legal Research | You are introduced to the Canadian and Ontario legal systems. Study legal materials, legal research, and the basics of running a law library. You will use primary and secondary legal materials and learn how to find information on specific topics using both paper and electronic resources. Explore acquisitions, cataloguing and collection development in a law library setting. | 42 hrs/3 cred |
| Marketing Research Techniques | This course is designed to use a hands-on orientation in identifying and evaluating business marketing solutions through the examination of several research techniques and applications. The student will use the key principles of problem statement creation, experimental research, and the questionnaire design process to develop actionable research solutions to help solve modern marketing problems. | 42 hrs/3 cred |
| Personnel Research Techniques and Human Resources Information Systems | This course involves the study of research techniques as they pertain to the measurement and conditioning of workforce behaviour. Discover knowledge related to the introduction of electronic human resources information systems (HRIS) into an organization by discovering project management, planning, and implementation models. The value of HRIS to effective human resources (HR) research activities will be explored by looking at actual practices of HR professionals. | 42 hrs/3 cred |
| Research and Rationales for Hyflex Classroom | This introductory course will delve into examples and research on the development of HyFlex classrooms in North America and Ontario. Discuss how the Hybrid-Flexible model allows students to choose their participation mode as needed within the same course delivery. Reflect on the challenges and benefits of the HyFlex model. | 6 hrs/1 cred |
| Researching and Reporting | In this course, communication skills are developed through hands-on application. Students can use examples related to their careers. Students will define a problem; collect research using print sources, the Internet, interviews, and questionnaires; and present their findings in reports. | 42 hrs/3 cred |
| **Retail operations** | | |
| Channel and Retail Marketing | This course focuses on the application of channel and retail marketing strategies to successfully develop and optimize organizational distribution systems. The student will use the key principles of channel design and implementation, end-user analysis, and retail merchandising to create channel and retail distribution strategies to enhance business marketing initiatives. | 42 hrs/3 cred |
| Retail Buying | From the fundamentals of buying and relevant merchandising mathematics, this specialized course on resale buying focuses on its' immediate connection to retail customers. The buying function is critical to the success of any retail firm and its' profits. The materials cover topics in organization, planning, merchandising, profitability, vendor selection, negotiation, buying, technology and Corporate Social Responsibility. | 42 hrs/3 cred |

Table 11. (cont.)

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Social media content management and strategy** | | |
| Social Media Essentials for Business | In this introductory micro-credential, you will gain a solid understanding of the commonly used social media platforms as well as a foundational knowledge of today's digital marketing space. Through real-world business examples, you will evaluate and assess market needs and learn how to effectively create measurable objectives. You will gain comprehensive knowledge on how to best leverage relevant social media platforms and utilize practical tools to create marketing plans that will meet business objectives. These courses are taught at the graduate certificate level. To be successful in this micro-credential it is strongly recommended you already hold a two- or three-year college diploma or university degree from an accredited college or university OR have significant relevant work experience in the area of marketing communications. | 2 courses |
| Information Management and Social Media | Information technology plays a fundamental role in reporting and analyzing information within most organizations. Depending on the size of the organization human resources information systems help to automate, enable and support training, payroll, HR, compliance and talent management related activities. This course provides an overview of various computerized systems available to Human Resources professionals. Students will gain an understanding of how Human Resource Information Systems (HRIS) can be used to increase the effectiveness of human resources in an organization and how it can help human resources in becoming a strategic business partner. Students will also explore social media strategy for HR professionals, the main social media channels currently in use by HR professionals, and the roles and value of each. The social media and digital technologies landscape are evolving, and it is essential that HR professionals learn how to navigate this 2.0 world and its technologies. | 42 hrs/3 cred |
| Social Media and Society | In a few short years, social media has profoundly changed the global communication landscape. With the advent of social media tools such Facebook, YouTube, Wikipedia, and Twitter, more and more people are connecting and collaborating online, and creating and distributing content in ways we have never seen before. This course will provide a summary of the major developments in social media and will examine how social media is changing media, business, government, the economy, development, and education in fundamental ways. Students will be introduced to a variety of social media environments and will gain hands-on experience with many of the leading social media applications. This course requires active participation of students and a willingness to immerse in social media practices. | 42 hrs/3 cred |
| Social Media Marketing | In this course you will be provided with a fundamental understanding of many of the different social media channels including the use of mobile apps and games for social media marketing. Once an understanding of the social media channels is established you will learn how to leverage the channels to engage audiences, and integrate with traditional media, in order to achieve marketing objectives. | 45 hrs/3 cred |
| Social Media Platforms | Social Media marketing is a driving force in today's market with 74% of shoppers making purchase decisions based on social media. This course provides an introductory overview to the social space, reviews the platforms and tools that organizations are using to drive consumer behaviour, and outlines the response rates that they are achieving. The course also reviews the role of Community Managers, and the differences between internal and external social media efforts. | 42 hrs/3 cred |
| Social Media Strategist | Successful Social Media Professionals need to be able to stay on top of trends, analyze data to make decisions, pitch campaign ideas and manage influencers. This course will prepare students for the day-to-day tasks required to stay relevant in the Social Media Industry | 42 hrs/3 cred |
| Using Social Media in Business | In recent years, business owners have started using social media to assist with finding new customers. This course will provide you with a solid foundation in social media marketing and how to use it to grow your business. | 24 hrs/1 cred |
| **Systems assembly, integration, and quality control** | | |
| Introduction to Quality Manufacturing | This micro-credential is aimed at applicant or incumbent front-line production workers in manufacturing facilities. The learning outcomes will provide the skills necessary to understand quality assurance tools specific to measurement, process capability, variation and statistical control. The courses in this micro-credential will be instructor led and completely online allowing participants the opportunity to work at their own pace from any location. The skills will be of value to production operators who wish to apply to other positions in a manufacturing environment such as quality control and inspection. The first course includes very introductory level math and statistics to give students a foundation to understand more complex Statistical Process Control (SPC) tools. Then it will develop skills in statistical analysis and decision making. The second course increases skill in statistical techniques used to evaluate quality and the analytical concepts used to evaluate various measurement systems. Topics include fundamentals in measurement error, gauge repeatability and reproducibility, process variation, capability and control. Courses in this micro-credential must be completed in the following sequence: STAT1020 followed by QUAL1410. Courses in this micro-credential can be applied to the Quality Assurance certificate program. | 2 courses |

*Table 11. (cont.)*

| Continuing Education | Course Description | Duration |
|---|---|---|
| **Systems assembly, integration, and quality control (cont.)** | | |
| Assembly, Wrapping and Packaging of Instrumentation, Supplies and Patient Care Equipment | This course introduces students to the proper techniques for the assembly, wrapping and/or packaging of surgical instruments, supplies and patient care equipment. Advances in surgical technique have resulted in the regular use of a wide assortment of complex and sophisticated surgical instrumentation. Healthcare professionals need to make sure these delicate and expensive items are protected and sterilized according to the medical device manufacturer's written instructions to minimize and eliminate patient risk. NOTE: Final exam must be proctored | 25 hrs/2 cred |
| **The Restriction of Hazardous Substances standards** | | |
| Hazard Identifications and Applied Safety Processes | Understanding the factors that impact the effectiveness and efficiency of a process contributes significantly to the success of a manufacturing business. In this course the learners will be provided with an overview of key topics such as: Business, Leadership and Teamwork, Quality Concepts, Traceability, Statistical Process Control, Continuous Improvement, Preventative Maintenance, Lean Manufacturing, Sustainability and Environmental Impact. Through group exercises and practical data collection from a real-life process, students apply theoretical concepts to calculate process parameters such as Overall Equipment Effectiveness and Cost per Unit. | 21 hrs/2 cred |
| **User experience** | | |
| UI/UX Design | User interface (UI) and user experience (UX) design have emerged as the framing approach to all digital design, including websites, apps, and other devices and one of the most valuable skills in today's digital design environment. This course provides a concentrated but substantial introduction to every key element in UI/UX design. Integrated throughout the course are real-world examples and skill-building materials that prepare students to enter into or become more valuable participants in the field of UI/UX design. | 24 hrs/1 cred |
| User Experience in Libraries | Prerequisite: This course is intended for Library Technicians and Librarians. User experience (UX) research explores the behaviour, needs, and expectations of the users of a product or service in order to create a better product or service. In this course, you will apply the principles and methods of user experience research to a library environment. You will practice research methods and develop a research plan leading to insights about library users and improvements to physical and virtual library services and spaces. | 42 hrs/3 cred |
| **Welding** | | |
| Industrial Maintenance Welding | This upskilling course is intended to provide Industrial Maintenance trades professionals with an understanding of the principles and safe practices for Shielded Metal Arc Welding (SMAW/Stick) and Gas Metal Arc Welding (GMAW/MIG) processes. Learners will enhance their welding and cutting skills. Experience in an industrial mechanical work setting is highly recommended. Participants are required to supply their own PPE including CSA approved safety shoes and clear safety glasses. | 40 hrs/3 cred |