

## Sustainability Course

Course that includes Sustainability

### School – Centre for Food (CFF) – Sustainability courses

#### How we define

The Centre for Food (CFF) is Durham Region's first-ever post-secondary presence focused on the **field-to-fork concept**, which is based on the harvesting, storage, processing, packaging, sale and consumption of food – in particular the production of local food for local consumers.

Durham College has adopted this concept and applied it to a diverse range of programs that crossover traditional academic schools with the curriculum, faculty expertise and equipment required to implement field to fork built into several of the college's programs.

Capitalizing on classroom and lab equipment availability, select courses may be offered at any of our locations including the Oshawa and Whitby campuses and the CFF, the heart of the college's field-to-fork vision.

Development of the CFF and Whitby campus will continue to grow with the creation of a pollinator garden, agriculture planting and demonstrator gardens supported by growth initiated in our greenhouse as well as curriculum and student support.

**\*Every course listed under this school would be considered a sustainability course or course that includes sustainability**

Level	Program	Course Code	Course Title	Course Description
GRAD	Advanced Baking and Pastry Crafts	BAKE 1201	Bakeshop Management Theory	This course covers a range of subjects including pastry shop and staff management, leadership, planning and costing a dessert menu, labour costing, marketing for special events and production forecasting. Students will learn the advantages and challenges of bulk purchasing and storing of dry goods, best practices for product rotation and <b>how to green your bakery</b>
GRAD	Advanced Baking and Pastry Crafts	BCAP 2202	Capstone – Advanced Bakery	Students will design, plan and execute a final capstone project, which includes menu planning, costing, ordering, marketing, producing, decorating and packaging a variety of items to be sold at a special event.
Diploma	Culinary Management	COMP 1210	Computers for Hospitality	Controlling costs, effective food and beverage purchasing, proper storage protocols, menu design, efficient labour management, and employee training are some of the topics covered in this unit of study.

Diploma	Culinary Management	CULI 1200	Culinary Theory I	This course provides an exposure to the fundamental theories and concepts related to food and baking preparation. Students learn about the organization of a professional kitchen, kitchen positions, culinary terminology, professional cooking equipment and the classification, origin and quality of basic ingredients. <b>Emphasis is placed on the "Field to Fork" concept in reference to procurement, availability and selection of ingredients.</b> Students will also learn about sourcing globally produced ingredients, weights and measures, production requirements and cooking & baking methods.
Diploma	Culinary Management	CULI 1201	Culinary & Baking Techniques	Over the course of this practical lab component, students develop the fundamental skills of safe food handling, professional knife skills, food/baking preparation & commercial kitchen efficiency. Students prepare, taste and evaluate basic stocks, soups & sauces, salads, yeast dough products and sweet & savoury pastry items. <b>Use of local food products and ingredients is emphasized to support the "Field to Fork" concept.</b>
Diploma	Culinary Management	FOOD 1200	Food Safety And Sanitation	In this course students explore the essential knowledge, skills and attitudes required for the provision of safe, quality food products, free from food borne contaminants, prepared in safe, well maintained environments. Students learn the role government regulations, temperature control, eco-friendly facility maintenance, and personal hygiene play in safe food service. The use of preventative HACCP protocols is emphasized.
Diploma	Culinary Management	GLOB 1202	Introduction to Global Cuisine	In this hands-on lab course, students will explore the use of specific ingredients and/or preparations and how they apply to cultures around the globe. Students will learn cultural similarities and differences related to the use of herbs, spices, flavouring ingredients and traditional food preparations. Safe food handling, proper culinary techniques, true-to-culture ideals and a healthy respect for the diversity of world cuisine will be discussed and practiced.
Diploma	Culinary Management	CULI 2200	Advanced Culinary Techniques I	Students will learn a variety of meat, poultry and fish fabrication techniques including carcass break-down into food service cuts. Additionally, this course teaches charcuterie, advanced cooking procedures, cheese making and hors d'oeuvres production. This course also expands on classic and modern plate presentation and provides an introduction to recipe development and crop harvesting. <b>Throughout the course students will make use of seasonal and local Ontario produce wherever possible.</b>

Diploma	Culinary Management	NUTR 2200	Culinary Nutrition	In this course students investigate nutrition and how it relates to menu planning in hospitality environments. After developing a foundational knowledge of basic nutrition and the effects of food on the human body, students make decisions about suitable menu offerings for a range of diverse situations and events while considering factors such as meal period, access to quality products and ingredients, costs, and guest tastes and dietary requirements.
Diploma	Culinary Management	PDST 1200	Professional Development Strategies	This course is delivered as three separate components. The first component, Personal Development reinforces industry awareness as established in Dimensions of Tourism and Hospitality. It enables students to find, and prepare for their upcoming field placement experience and to situate themselves positively for future employment by exploring workplace opportunities using current job search techniques, preparing a resume and portfolio, and practicing interview skills. Students also write a professional development plan that identifies their career or educational goals and the actions required to achieve their stated goals. Materials learned in this course are aligned with concepts of the Computers for Hospitality course to provide cross-curricular support to students. Components 2 & 3 integrate the practice of ongoing personal and career growth by including Smart Serve? and introductory dining room/customer service training, to prepare students for their second semester Food Service Operations course, <b>where they will be immersed in the daily operation of Bistro '67, our student-run green certified restaurant.</b>
Diploma	Culinary Management	FOOP 2200	Food Service Operations	In Foodservice Operations students learn in a restaurant environment where they participate in both front-of-house and back-of-house operational responsibilities. Students continue the development of their practical culinary skills with a focus on preparation and service of a la carte menu items. Students also provide comprehensive guest service from initial contact to guest departure. Emphasis is placed on working cooperatively and collaboratively in a team environment to provide guests with an exemplary foodservice experience.
Diploma	Culinary Management	PKM 2200	Principles of Kitchen Management	In this course students engage in operational scenarios focused on the financial and managerial aspects of a professional kitchen. On the financial side, students learn how to purchase products, store and control inventory, calculate recipe costs, recommend appropriate pricing, and calculate and control food and labour costs. On the managerial side, students develop quality assurance tools, determine basic staffing requirements, determine what constitutes appropriate work performance within the parameters of existing standards and expectations, articulate an approach to effective supervision and define the role and behavioral expectations of a kitchen supervisor or manager.

Diploma	Culinary Management	MKTG 4210	Hospitality Marketing	Marketing is often defined as advertising - a highly visible activity by which organizations try to persuade consumers to buy products and services. However, marketing is much more than advertising and even the most skillful marketing cannot make consumers buy goods and services that they don't want. With a strong focus on the hospitality industry, the student will learn that marketing involves two basic sets of activities. The first set starts with identifying consumer needs and ends with positioning the product or service to satisfy those needs and differentiate it from competition. In between, rigorous analysis of the competition, the customer, the environment, and the company's own capabilities are required. The second set of activities revolves around the "marketing mix" - letting the consumer know about the product or service in an attention-getting, convincing, and motivating way, getting it to the consumer through the best combination of distribution channels, pricing it effectively, and offering incentives to try, purchase, and purchase more.
Diploma	Culinary Management	RETL 3201	Retail & Quantity Food Production	In Retail and Quantity Food Production, students continue the development of their practical culinary skills with a focus on preparation of a variety of ready-to-eat, ready-to-cook and ready-to-heat foods. Building on skills learned in other culinary lab courses, students will work within directed timelines to produce food for sale in the Centre for Food retail outlets. Students will focus on attention to detail in presentation, adherence to recipe specifications and nutritional values, use of seasonal and local ingredients and appropriate retail packaging & presentation. Additionally, students will be introduced to market research techniques and product/recipe research & development procedures. Emphasis is placed on working cooperatively and collaboratively in a team environment to provide patrons with a consistent and desirable variety of foods.
GRAD	Event Management	EMCS 1050	Catering, Sales & Sponsorship	In this course, students will become familiar with the various food and beverage aspects of event planning. This will include menus, function set-ups, service styles and pricing policies. A practical overview of sales procedures is integrated with selling techniques. Students will also focus on the process of sponsorship, from creating packages through to delivering on organization and sponsor needs.
GRAD	Event Management	EMFF 1030	Finance for Special Events	The special event student will be introduced to the concept and importance of controlling the primary costs of food, beverage, hotel rooms, banquet halls and labour. The student will learn the various techniques, procedures, and calculations used in the hospitality industry to evaluate, monitor and maintain appropriate control policies and procedures through the various functions of purchasing, receiving, storing, issuing, and production and portioning. The interpretation of financial statements will enable the student to gain valuable insight into the operational decision making process in the hospitality/special event sector. An introduction to the operational budgeting process will also facilitate the student to gain valuable understanding of the importance of profitability in the hospitality industry.

GRAD	Event Management	EMPL 1000	Event Planning	This is an introduction to business and social event planning from a macro level in which all dimensions of the industry will be explored. Students will learn about the scope of the industry and the events stakeholders plan and attend, its social and economical significance, current industry trends and the relevance of professionalism and ethics within the industry enabling the recognition of skills and behaviors being sought by employers in today's market place. We will explore the importance of communication skills: presentation skills both written and oral, networking with industry partners, association peers and customers. We will delve into the importance of a customer focused behavior both internally and externally within an organization and explore transferrable business administration tools to the operation of events.
GRAD	Event Management	EMCS 2060	Capstone Theory & Practical	Students engage in a semester long project, designed to allow them to demonstrate the skills and abilities that they have developed over the entirety of the Event Management program. Teamwork, project management, oral and written communications, planning and executing, human resources and supervisory skills, customer service, marketing and financial management, as well as many other disciplines are key to the student team being successful in the execution of the project. Completion of the project-related tasks teaches students essential organizational, communication, problem-solving, critical thinking, and interpersonal skills.
GRAD	Event Management	EMGR 2020	Sustainable Business Practices for Events	The greening of festivals, event and conference using environmentally friendly products is now becoming a concern for festival and event planners. Students will have the opportunity to learn how to reduce, reuse and recycle products. This course will also include decor options, energy and fuel reductions and the creation of effective waste management and composting programs.
GRAD	Event Management	EMRI 2010	Risk & Security Management	A seasoned events planner recognizes the need to take risks and security into consideration while undertaking any type of events planning. An integral part of any events planning certificate will therefore include a course on how to effectively plan, identify, assess, analyze and control risks within the context of special or general types of events. This course delivered in a hybrid format will focus on the fundamental methods required to safely plan and manage events, festivals or conferences including but not limited to: health and safety concerns, crowd control, food services, along with alcohol consumption and security management requirements. Students will learn how to manage potential risks by obtaining permits, handling contracts, purchasing insurance, reviewing legal documentation, in addition to effectively prevent and address risk related issues from the inception of the event and up to its delivery.

Diploma	Horticulture – Food and Farming	AGFA 1131	Fruits for Artisan and Urban Agriculture	This course will provide the student with a broad knowledge of fruit production while using a major project to build on specific interests throughout the term. New urban and ethnic markets have created demand for new fruit types and varieties. The course will explore what markets have thrived in the past, what have failed, and what the future may hold. The student will come away with an appreciation of how basic nutrition, water & soil conditions, and localized microclimates impact fruit production in Ontario. Mainstream and organic production practices are covered in parallel as topics are developed. The two-hour lab is spent in the greenhouse, lab, field or as extra lecture time as appropriate from week to week. Fruits covered include, but not be limited to, apples, cherries, strawberries, currants, raspberries, grapes and high bush blueberries.
Diploma	Horticulture – Food and Farming	HTGS 4131	Greenhouse Structure, Controls And Energy Management	<b>The basic concepts of energy efficient greenhouses will be studied along with programmable control systems regulating temperature, humidity, carbon dioxide, irrigation, fertilization and other variables. Various energy systems will be examined including biomass, cogeneration greenhouses and traditional natural gas systems.</b> This course will be presented with two 2-hour blocks so that faculty can use the lecture room, greenhouse, field or laboratory as appropriate from week to week. Further experience will be gained in managing plant production in greenhouses.
GRAD	Advanced Baking and Pastry Crafts	FERM 1202	Fermentation	This course focuses on understanding and applying the concept of fermentation to the making of products using yeast. Apply fermentation and ingredient function theory to create rich and lean dough, artisan bread, seasonal favorites and international specialties. Learn to manage gluten and control fermentation to produce sourdough and pre-ferments. Students will focus on proper dough development techniques, shaping and scoring. The student will further explore the lamination process, exploring laminated dough, enriched dough, and the unique characteristics of each method.
Diploma	Culinary Management	ABAK 3200	Advanced Baking & Pastry Techniques	Students will learn a variety of bakeshop techniques as they prepare modern and classic desserts, breads and bakery products for retail sale and service. <b>An emphasis will be placed on the use of local foods and taking advantage of seasonal ingredients.</b>
Diploma	Horticulture Technician	HTHP 1131	<b>Horticulture Principles And Sustainable Practices</b>	This course introduces basic botany as it applies to horticulture species and initiates study of the propagation of major horticulture field crops in the region. Basic coverage of crops such as tomatoes, cabbage, cauliflower, pumpkins, squash, berries, apples and adapted ethnic vegetables and fruits are presented. Species that are particularly appropriate for community, home and balcony gardens will be discussed. Plant identification, native species, invasive species, and low maintenance species are discussed. Basic nutrition, water and growing condition requirements will be addressed. Mainstream and organic production practices will be covered in parallel as topics are developed. An awareness of potential environmental impacts is fostered.

Diploma	Horticulture – Food and Farming	AGFA 2131	Food and Agriculture Regulations And Policies	This course provides a review of the content, context and impact of federal, provincial and municipal legislation and regulations. <b>The Canadian Food Inspection Agency regulations, The Ontario Environmental Protection Act, the Nutrient Management Act, the Pesticides Act, land use planning, the Green Belt Act and their key regulations are covered. Environmental Farm Plan requirements will be studied.</b> Specific applications related to agriculture production, food processing and wastes are emphasized. <b>Organic certification is covered. Current federal and provincial incentive programs for small business will be examined and strategies to keep current with these programs are explored.</b>
Diploma	Horticulture – Food and Farming	AGPV 1131	Propagation of Vegetables for Field and Urban Agriculture	This course introduces the principles of the propagation of major horticulture field crops in the region. Basic coverage of vegetable crops including, but not limited to, legume, cole, root, tuber, leaf, stem perennial crops, summer and winter squash, peppers, sweet corn and tomatoes are presented. Production of selected herbs is introduced. Specialty crops of increasing importance particularly in ethnic markets are explored. Species that are particularly appropriate for community, home and balcony gardens are studied, also. Basic nutrition, water and growing condition requirements are addressed. Mainstream and organic production practices are covered in parallel as topics are developed. This course involves the lecture room, greenhouse, field or laboratory as appropriate from week to week. Harvesting and storage aspects of the production of vegetables are covered in a subsequent course.
Diploma	Horticulture – Food and Farming	AGPD 2131	Farm Planning and Design	This course introduces the student to the methodologies of farm planning and design. Topics span the planning and decision-making necessary from pre-planting to market as they relate to the fundamentals of length of growing season, soil-plant relationships, farm microclimates, the layout of buildings, allocation of site uses, crop planning, species selection and both short-term and long-term farm visioning. <b>The design of a farm will be understood as a process that is very important to the sustainability of any farm venture, economically and environmentally.</b>
Diploma	Horticulture – Food and Farming	AGPD 4131	Artisan Product Development	This is a three-hour lecture and lab course <b>that introduces students to the basic stages of creating a new food product from concept to consumption and from field to fork using the team approach commonly used in the food industry.</b> Regulatory requirements, labelling, prototype development and consumer testing are integral parts of this development process. The development of functional food and innovative foods are discussed. This course focusses on products containing fruits or vegetables as major ingredients but with permission other locally grown ingredients, such as chickpeas or lentils can be used.

Diploma	Horticulture Technician	HTLD 1131	Landscape Planning; Materials & Construction I	This course introduces the fundamental characteristics and use of many of the materials such as wood, concrete, concrete products, aggregates, stone, and geo textiles used in basic landscape construction projects as well as plant materials as they relate to softscaping projects. Students will demonstrate skills relating to hard and soft landscaping to produce a final project. <b>Low maintenance species, non-invasive, drought tolerant, eco-friendly and natural garden concepts are covered.</b> The documenting and reporting of costs of each component of the design will be stressed and the basics of project staging for time and cost effectiveness are introduced.
Diploma	Horticulture Technician	HTCP 4131	Topics in Horticulture	Topics of timely interest within Horticulture are presented in modules and will include, but not be limited to, project management, quality management, human resource management, risk management and safety plans. The topics covered have direct or indirect implications to other courses and are presented here so that the fundamentals of these concepts can be enhanced in various ways as applicable. This course provides the basic concepts for students to plan, organize, and manage resources to enable the successful completion of a specific project incorporating health and safety standards. Bringing a project in on schedule, on budget and up to design standards are key components of the course. In the competitive landscape sector, the quality of products and services need to match customer expectations. Students will have the opportunity to expand their understanding of customer expectations and better appreciate their role as employees integrating into this type of business environment where all aspects of customer and public perception are so important. Students study the climate trends and potential impacts on the industry. The basic characteristics of common weather systems will be covered so that students have an appreciation of the impact of weather on daily activities, such as, planting dates, irrigation and frost protection.
Diploma	Horticulture Technician	HTSG 1131	Sustainable Garden Concepts And Design	This course will introduce the philosophy of design, the basic design principles and practical skills necessary for the development and deployment of a landscape plan. Students will be exposed to reading and following an existing draft plan or blue print including scale and reading elevations variations. Subsequently students will develop plans. The phasing of each plan development will begin with the assessment or evaluation of the site for its key natural characteristics and then the progressive evolution of a landscape plan. This course will be project oriented and involve case studies as well as skills development such as basic drafting. The laboratory component will augment the lectures and allow students to enhance basic drafting and graphic skills. Students will be made aware of professional associations, trade journals, important websites and important horticultural events that can assist with information and potential contacts to assist with their experiential professional development.

Diploma	Horticulture Technician	HTAR 3131	Arboriculture	Tree growth and structure will be discussed relative to site selection, species selection, placement, planting or transplanting subsequent care and management. The significance of trees in the environment will be stressed. Tree handling equipment and tree maintenance will be studied. Safety will be a focus of this course and students will study industry standards for arborists.
Diploma	Horticulture Technician	HTGP 2131	Greenhouse Production And Indoor Plants	This course will focus on the production of vegetables such as tomatoes, cucumbers and peppers as well as some herbs, edible flowers, ornamentals and designated tropical specific to controlled environment applications. The production of locally grown species of flowers and seedlings will be introduced. Soils/container growth media and fertilizers will be studied relative to their impact on plant growth and yield. Visits to area commercial greenhouses will enhance the student learning experiences. Also, students will study the specific needs of growing indoor plants for homes, offices or solariums.
Diploma	Horticulture Technician	HTNM 1131	Nursery Operations And Management	This course introduces the practical principles of producing plants under nursery conditions and stresses plant identification as an important component. Factors in the selection of an appropriate site, growth media and preparation of the site and plant material are included. The typical operations of planting and/or transplanting, nutritional requirements, irrigation method and amount, digging, grading and shipping will be studied and practiced. Field trips to local nursery farms and stores are an integral part of the students learning experience. This course will be presented with one 1-hour and one 2-hour block so that faculty can use the lecture room, greenhouse, field or laboratory as appropriate from week to week.
Diploma	Hospitality – Hotel and Restaurant Operations Management	HOOP 2200	Hotel Operations	In Hotel Operations students are introduced to the essential concepts required to function within the rooms division of hotel or other accommodation environments. Students learn what constitutes exemplary guest service from pre-arrival to post-departure. The students also explore how the functioning and interaction of various Rooms Division departments contribute to an exceptional guest experience. They research and develop alternative eco-friendly operational practices related to energy efficiency, waste reduction and recycling, cleaning products and practices and air quality. As well, students take part in a Hotel Business Simulation.
Diploma	Special Events Management	GRFE 2200	Sustainable Business Practices For Events	The greening of festivals, event and conference using environmentally friendly products is now becoming a concern for festival and event planners. Students will have the opportunity to learn how to reduce, reuse and recycle products. This course will also include decor options, energy and fuel reductions and the creation of effective waste management and composting programs.

GRAD	Advanced Baking and Pastry Crafts	PAST 1202	Pastry And Preserves	Explore the variety of advanced pastry techniques while practicing pate a choux, pate sucee, pate sable and pie doughs to design and create a variety of pies, flans and tarts. Also discover an assortment of classic and modern French pastries. Additionally, students will learn to prepare a variety of preserves using local fruit.
GRAD	Advanced Baking and Pastry Crafts	DESS 2201	Individual Desserts	Explore the steps for planning and conducting production for plated desserts, banquets, VIP events, large functions and retail pastry settings. In this course, students learn how to design and produce pastry and desserts for a variety of outlets. Combine skills already acquired to create individual desserts appropriate for any event or venue.
GRAD	Advanced Baking and Pastry Crafts	ENTB 1201	Entrepreneurship	This course will cover a wide variety of introductory topics for those interested in starting or seeking employment in small business. The course will focus on the entrepreneurial spirit, the benefits and drawbacks of being your own boss. Start-up skills will be explored as well as defining markets, targeting customers, and the three ways to enter small business by buying an existing business, franchising opportunities, and "from-scratch" operations. The ability to maintain and sustain operations of a small business will be covered with particular attention to cash management, debt and financing. Finally the skills of the small business entrepreneur will be featured by a detailed construction of the main components of a business plan and the necessary "Jack of all trades" management style it takes to succeed.
Diploma	Culinary Management	COMM 2204	Communication s for Business	This course reviews and enhances students' communication skills as they directly pertain to the workplace. Students respond to and compose skillful messages for different purposes and audiences. In addition they research, evaluate, and document information. Communicating effectively in diverse teams and across cultures is emphasized, as is the ability to deliver short oral presentations on a variety of business-related topics.
Diploma	Culinary Management	CUIS 2201	Cuisine A La Carte	In this practical lab setting students prepare, taste, compare and evaluate a variety of products including: baked goods, starches, vegetables, meats, poultry and fish. Students will learn modern and traditional methods of preparation and presentation of food for sale in a la carte and retail outlets. <b>Whenever possible, emphasis is placed on the "Field to Fork" concept and use of local ingredients</b>
Diploma	Culinary Management	CULI 2201	Culinary Theory II	This course builds on the foundational knowledge acquired in Culinary Theory I. Students explore more advanced theories and concepts including culinary terminology, meat cuts and related cooking methods, various fowl and poultry, beverages, the role of wine in cooking, as well as the use of contemporary and traditional garnishes in food presentation. Students also investigate regional food products and cuisine, the relationship between food and culture and contemporary food trends.
Diploma	Culinary Management	MENU 2200	Menu Planning	In this course students gain experience writing various types of menus. Working in teams, students design a menu from a nutritional, sales and cost point of view for a food and beverage operation.

Diploma	Culinary Management	PDST 2200	Professional Development Strategies II	This course will provide students the opportunity to learn about career development strategies and prepare for employment in various sectors of the food service industry.
Diploma	Culinary Management	CULI 4201	Advanced Culinary Techniques II	In this living lab course, students will explore ethnic and modern cuisine principles, flavours, ingredients and preparations. Modern plating trends, fusion cooking, true-to- culture ideals and a healthy respect for the diversity of world cuisine will be discussed and practiced. Students will also be exposed to the use of food as an art form in preparing showpieces for buffets and culinary salons. <b>Throughout the course students will use of seasonal and local Ontario produce wherever possible.</b>
Diploma	Culinary Management	MGMT 4202	Restaurant Management Theory	Students will learn how to analyze restaurant sales to forecast budgets for food & beverage purchasing, menu planning, recipe costing and scheduling of staff. Preparation of a variety of financial statements, control systems, human resources and kitchen efficiency forms will be focused on exposing students to the tools required by effective restaurant managers. Students will also learn the practice of management techniques used in a variety of foodservice operations.
GRAD	Event Management	EMMA 1020	Event Media & Marketing	Event Marketing is much more than advertising and even the most skillful marketing cannot make consumers buy things that they don't want. In this course the student will learn that marketing involves two basic sets of activities. The first starts with identifying consumer needs and ends with positioning the product or service to satisfy those needs and differentiate it from competition. In between, rigorous analysis of the competition, the customer, the environment, and the company's own capabilities are required. The second set of activities revolves around the "marketing mix" ? letting the consumer know about the event or product in an attention-getting, convincing, and motivating way, using traditional communication media vehicles and new social media tools, as well as the components and importance of effective pricing. Students will develop a well-conceived, researched, and written marketing plan for an event
GRAD	Event Management	EMPR1040	Event Programming	Students learn about the programming elements for corporate events, conferences, festivals, galas and sporting events. Principles behind planning, organizing and implementing these programs are introduced. By examining a variety of event types and approaches, students will have the opportunity to discover the unique components required including: delivery methods, themes, attendee participation, site selection and event agenda. Developing a critical path, staffing and budgeting are explored.
GRAD	Event Management	EMPS 1010	Event Production & Site Logist	This course will give students the knowledge and skills to produce a successful event. Topics will cover operational functions related to the planning, executing and post-event tasks of both large and small events. Logistical elements required will include: site survey and analysis, food & beverage set-ups, registration, decor, sound, lighting, staging, transportations, parking and lodging. Concepts learned in this course will form a foundation of knowledge that will be applied to the Capstone project

GRAD	Event Management	EMSE 2030	Special Events Management	This course is designed to help students integrate knowledge and insights gained in several other courses through a critical consideration of event operations from a management and leadership perspective. Students study the skills required to manage people in a range of business environments. They begin by exploring various management styles and how these are impacted by organizational culture and structure. Functions such as planning, decision making, communication, conflict resolution, motivation, and control in diverse workplaces, including unionized and non-unionized organizations, are explored from a management perspective. Students also define and discuss the concepts of management and leadership.
Diploma	Horticulture – Food and Farming	AGFB 1131	Fundamentals of Botany, Plant Pathology & Entomology	The fundamentals of botany relating to selected horticultural plants in horticulture and urban agriculture are taught in conjunction with plant pathology and entomology. Topics include the most common plant diseases in horticulture in the region with emphasis on identification, nomenclature, life cycles, damage recognition and basic evaluation, and management of the diseases. Also, the common insect pests in the region are covered with emphasis on identification, nomenclature, life cycles, damage recognition and management of the insects.
Diploma	Horticulture – Food and Farming	AGFM 2131	Food Microbiology	This course introduces the student to the diversity of the microbial world associated with foods. The growth, reproduction and enumeration of microorganisms are studied as well as the effects of chemical and physical agents on microbial growth. The relationship between microbes and food and their human hosts to food borne disease is also studied. The laboratory component provides hands on experience in the aseptic techniques necessary to work in a food microbiology lab. Students use these techniques to enumerate both pathogenic and non-pathogenic organism found in food.
Diploma	Horticulture – Food and Farming	AGTA 1131	Topics in Field and Urban Agriculture	Topics of timely interest within value-added agriculture are presented in modules and will include, but not be limited to, natural toxins in foods, brief basic introduction to organic agriculture (expanded upon in other courses), traceability in foods, quality management, human resource management, risk management and safety plans. The topics covered have direct or indirect implications to other courses and are presented here so that the fundamentals of these concepts can be enhanced in various ways as applicable.
Diploma	Horticulture – Food and Farming	THIS 2131	Introduction to soils, agriculture and horticulture	Students study about geology, soil formation and the physical, chemical and biological properties of soils in central Ontario where horticulture crops are common. Soil management, minimizing erosion and the fundamentals of plant nutrition and fertilization of crops will be presented. <b>Fundamental environmental impacts of various management systems will be examined.</b> Students are introduced to the agricultural industry and the horticulture sector of that industry. A brief history of the development of agriculture and agricultural organizations and agencies is presented.

Diploma	Horticulture – Food and Farming	AGOH 3133	Harvest & Post Harvest Methods & Systems	This course introduces the student to the integrated concepts of harvest and post-harvest biology with the methods and technologies of harvesting and storage where applicable. Topics span the planning and decision-making necessary from pre-planting to market as they relate to harvest timing, desired harvest duration, harvest method and type of storage, if necessary, to further extend the market season. Consideration will be given to harvest methods and possible storage techniques for both modest sized operations up to larger more mechanized production systems. The harvest methods for both vegetables and fruits of traditional and emerging local popularity are studied in designated groups that have somewhat similar growth, harvest and possibly storage similarities. For example, groupings include but are not limited to tree fruits; root crops; brassicas; berries; melons, pumpkins and squash; sweet corn. Sanitation, standardization, food safety and quality are considered for various methodologies studied.
Diploma	Horticulture – Food and Farming	HTGP 2131	Greenhouse Production And Indoor Plants	This course will focus on the production of vegetables such as tomatoes, cucumbers and peppers as well as some herbs, edible flowers, ornamentals and designated tropicals specific to controlled environment applications. The production of locally grown species of flowers and seedlings will be introduced. Soils/container growth media and fertilizers will be studied relative to their impact on plant growth and yield. Visits to area commercial greenhouses will enhance the student learning experiences. Also, students will study the specific needs of growing indoor plants for homes, offices or solariums.
Diploma	Horticulture – Food and Farming	HTIP 4131	Integrated Pest Management	This course studies the basic concepts, principles and components including anticipation, prevention, observation and intervention involved in integrated pest management in fields and greenhouses. Pest monitoring protocols and sampling plans will be developed for major pests. Proper residue and waste management, cultural practices, biological and mechanical control techniques, and pesticides application will be considered. Pesticide options will be discussed with timing and safe handling, storage, drift, safety, environment, residues on produce, legislation and dose calculation. Students will be trained in both backpack and powered spray equipment calibration. Integrated Pest Management programs will be developed for selected crops/plants. Also, students will study integrated pest management for indoor plants for homes, offices or solariums. Upon completion of this course the students would be able to write the certificate exam for the Ministry of Environment Pesticide License (Landscape/greenhouse module) and the Pesticide safety exam for the Ministry of Agriculture (Growers/Assistants module).
Diploma	Horticulture Technician	HTAH 3131	Annual & Herbaceous Perennials For Historical & Contemporary Gardens	Students will study the key identification characteristics, propagation, planting and growth of a wide variety of annual, perennial and biennial plants. Students will learn to recognize plants by studying flowers, flowering traits, and time of flowering. Plants favoured by birds, bees and/or butterflies will be noted. Local cooperators and projects will be sought for the benefit of students and community. Students may be involved in the studying, planning and maintenance of historical plants and gardens.

Diploma	Horticulture Technician	HTIS 2131	Introduction To Soils, Agriculture And Horticulture	Students study about geology, soil formation and the physical, chemical and biological properties of soils in central Ontario where horticulture crops are common. <b>Soil management, minimizing erosion and the fundamentals of plant nutrition and fertilization of crops will be presented.</b> Fundamental environmental impacts of various management systems will be examined. Students are introduced to the agricultural industry and the horticulture sector of that industry. A brief history of the development of agriculture and agricultural organizations and agencies is presented.
Diploma	Horticulture Technician	HTWD 1131	Woody Deciduous & Evergreen Species	Plant identification and knowledge are fundamental skills in the landscape and horticultural industries. This course involves the study of approx. 100-120 woody deciduous and evergreen plants hardy to at least USDA zone 5 including identification, landscape characteristics, growing conditions, typical use, common pests and diseases and other potential problems. Students will learn the proper nomenclature for all of the plants studied in the course. Plants will be studied in the classroom, on the grounds at Parkwood and on field trips when possible.
Diploma	Horticulture Technician	HTEP 3131	Entomology & Plant Pathology	Topics include the common insect pests in horticulture, landscaping, greenhouse and selected fruits and vegetables in the region with emphasis on identification, nomenclature, life cycles, damage recognition and basic evaluation, and management of the insects. Common plant diseases in horticulture in the region receive equal emphasis again focusing on identification, nomenclature, life cycles, damage recognition and basic evaluation, and management of the diseases. Integrated pest management will be introduced with brief discussion on cultural practices, biological control methods and chemical control options. Importance of bees for honey production and pollination will be discussed.
Diploma	Horticulture Technician	HTLA 3131	Historical And Contemporary Landscape And Garden Maintenance	Students will evaluate existing landscape installations relative to structural soundness and aesthetic value. Recommendations will be made for maintenance and repair of hard landscape features to enhance the sustainability. When appropriate, new trees, shrubs, bulbs and flowers will be planted in order to renovate the landscape. <b>Sustainable low maintenance species and systems will be discussed in greater detail than in previous courses.</b> Where possible, projects within the community will be selected for rejuvenation so that there is a benefit to the community and to the experience of the students. Mainstream and organic production practices will be covered in parallel as topics are developed. Whenever practical, students will be involved in maintaining, sustaining and enhancing of the Parkwood National Historic Site and Gardens.
Diploma	Horticulture Technician	HTLD 3131	Landscape Planning, M&C II	This course builds on Landscape Planning, Materials and Construction I. Students will have the opportunity to plan more sophisticated and complex combinations of materials and plants. <b>Small water gardens, green roof applications, living walls, actual wall construction are developed. Sustainable, eco-friendly concepts are stressed.</b> Students will be introduced to various spreadsheet and computer applications commonly used in horticulture and select landscape software.

Diploma	Horticulture Technician	HTPT 3131	Parks & Turf Management	Municipal parks are prominent components of communities and most receive heavy use. Students will study the management and maintenance of these parks, turf, playing fields, gardens and botanical gardens. Watering regimes and irrigation systems will be studied. Soil preparation, turf grass seeding, fertilization, irrigation, mowing and harvesting will be studied as performed on turf production farms. Turf grass seeding and laying of sod on lawns in addition to other maintenance procedures will be examined and performed. Lawn care business practices will be studied in light of the banning of pesticides for aesthetic purposes. The importance of public relations will be discussed.
Diploma	Horticulture Technician	HTIP 4131	Integrated Pest Management	This course studies the basic concepts, principles and components including anticipation, prevention, observation and intervention involved in integrated pest management in fields and greenhouses. Pest monitoring protocols and sampling plans will be developed for major pests. Proper residue and waste management, cultural practices, biological and mechanical control techniques, and pesticides application will be considered. Pesticide options will be discussed with timing and safe handling, storage, drift, safety, environment, residues on produce, legislation and dose calculation. Students will be trained in both backpack and powered spray equipment calibration. Integrated Pest Management programs will be developed for selected crops/plants. Also, students will study integrated pest management for indoor plants for homes, offices or solariums. Upon completion of this course the students would be able to write the certificate exam for the Ministry of Environment Pesticide License (Landscape/greenhouse module) and the Pesticide safety exam for the Ministry of Agriculture (Growers/Assistants module).
Diploma	Hospitality – Hotel and Restaurant Operations Management	TOUR 1201	Introduction To Tourism & Hospitality	Dimensions of Tourism and Hospitality provides students with an overview of the eight sectors that constitute the Canadian Hospitality and Tourism industry, paying specific attention to the Accommodations and Food and Beverage sectors. <b>Students explore hospitality trends and issues and their social, political, and economic impact. The course also focuses on environmental challenges and opportunities facing this industry.</b> Students gain an appreciation of the roles, skills and professional attitudes and behaviours required for various hospitality careers, enabling them to make informed decisions about their future careers.

Diploma	Pharmaceutical and Food Science Technology	MICR 2131	Food Microbiology	The aim of this course is to provide instruction in the general principles of food and water microbiology. The course examines the relationship between microbes, foods and their human hosts in relation to food borne disease and food safety. The relationship between microorganisms and food, both in the negative (spoilage) and the positive (fermentation) contexts is also thoroughly covered. The laboratory component of this course focuses on further development of microbiological techniques to determine microbial populations and isolate specific disease causing microorganisms found in food products. This is done by using conventional accredited laboratory methods and rapid methods. The course also includes a unit on water quality including the microbiological components of wastewater treatment and the microbial analysis of water using standard methods.
Diploma	Pharmaceutical and Food Science Technology	GOOD 1131	Food & Drug Laws & Regulations	Good Manufacturing Practices (GOOD 1131) is a three hour lecture course intended to introduce the student to Food and Pharmaceutical legislation. This course reviews current legislation - federal, provincial, and municipal - that regulates the food and pharmaceutical industries in Ontario and the agencies that enforce the legislation. The Food and Drugs Act, the pharmaceutical and food good manufacturing practices (GMPS) are discussed. WHMIS, HACCP, ISO 9000 and similar quality programs are discussed.
Diploma	Pharmaceutical and Food Science Technology	PROC 5131	Processing Operations I	This is a three hour lecture, two hour lab course designed to discuss foods, their quality parameters and the principles of food processing and food safety. Topics are covered from a general point of view with descriptive material provided for representative applications. Subjects covered include: major and minor food components, unit operations, quality factors, deteriorative factors of foods, heat and cold preservation and processing and an introduction to HACCP.
Diploma	Pharmaceutical and Food Science Technology	PROC 6131	Processing Operations II	This is a three hour lecture, two hour lab course which covers various aspects of food and some pharmaceutical manufacturing. Topics are covered from a general point of view with descriptive material provided for representative applications. Major topics covered include dehydration and concentration processes, sterilization systems, irradiation, microwave heating, ohmic heating, other newer technologies, food fermentations, packaging materials, food additives, vitamin addition and some specific food commodities.
Diploma	Special Events Management	EVNT 4201	Event Production & Site Logistics	Focusing on the organizational principles associated with the successful operation of festivals, events or conferences, this course will offer students insight into the technical and non-technical aspects of event planning including site surveys and analysis; sound; lighting; staging; parking; food and beverage service management; and loss prevention. Operations management includes planning, controlling, forecasting, SWOT analysis. Special permits, understanding bylaws, employee health and safety issues, budgeting and creating a critical path for the festival, event or conference.

Diploma	Pharmaceutical and Food Science Technology	MICR 1131	Introductory Microbiology	<p>This course will provide a broad based introduction to practical and applied aspects of Microbiology. The course will include a practical and theoretical introduction to microbial cell morphology including structure and function of prokaryotes and eukaryotes. The diversity of the microbial world and its application to the environmental, biotechnology, food and pharmaceutical industries will be examined. The growth, reproduction and enumeration of microorganisms will be studied as well as the effects of physical and chemical agents on microbial populations. The laboratory component will provide hands on practical experience in the isolation, identification, cultivation and enumeration of microorganisms. Students will also prepare and sterilize microbiological media. After successful completion of the course students will have the knowledge and the ability to perform analysis using aseptic technique is essential for an employee to work safely in a microbiology lab and to provide accurate results.</p>
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## School of Business, IT & Management (BITM)

Level	Program	Course Code	Course Title	Course Description
Grad	International Business Management	MGMT 1211	Global Supply Chain Management	This course focuses on the essential basics of getting goods and services to the customer, in both the service and the manufacturing industries. The learner will understand the importance of supply chain management in the success of all international trade ventures, including the exporting and importing of raw materials and finished products. Standard trade documentation and Incoterms are also covered, as well as the principles for managing production, inventory, delivery and returns efficiently and cost effectively. Methods to reduce supply chain risk and enhance performance are also included.
Grad	International Business Management	BUS 1203	Global Business Environment	This course is intended to provide the student with an understanding of the current and future global business environment, from the national and global perspectives, respectively. Topics include an overview of international business patterns and social systems and their effect on business in other countries. This will provide a framework for the creation of international business strategies requisite for success in the global marketplace.
Diploma	Sport Administration (two-year)/Sport Management (three-year)	SPAD 1305	Sport in Society	Sport in Society provides students the opportunity to research and to discuss relevant societal issues within the context of sport. As future professionals in the sport industry, it is essential for students to recognize the diversity and uniqueness of given populations and to address these various populations' needs. Topics include an introduction to sociological theories, philosophy and ethics and dialogue on sportsmanship, gender, race and ethnicity, youth in sport, media and sport, the future of sport, and current issues.
Diploma	Accounting & Payroll	ORGB 2200	Organizational Behavior	This course examines and explores how individuals interact with others within an organization, and how managers can use knowledge of individual needs and motivational factors to develop and improve organizational performance. Included is the review of how individuals perceive themselves and others, motivational theories and application, team processes and dynamics, communication approaches, power and leadership theories, as well as approaches to organizational structure and culture.

Diploma	Recreation and Leisure Services	RLWL 4200	<b>Wellness Lifestyle Management</b>	This course will provide the student with an understanding of the basic concepts of personal wellness: physical, intellectual, emotional, social, spiritual, environmental and occupational. The course will largely focus on the physical dimension of wellness by studying the components of physical fitness, fitness training and common health issues. Students will examine their own wellness and will develop a plan to maximize that wellness. In addition, the course will look in detail at employee wellness programs and how they contribute to workplace wellness. Note: This course will be delivered as a hybrid course. Students will have two hours/week in the classroom and another hour online (DC- Connect). All quizzes will be conducted online.
Diploma	Sport Administration (two-year)/Sport Management (three-year)	MGMT 4304	<b>Volunteer And Non-Profit Management</b>	This course provides students with an introduction to Non Profit Organizations, including an examination of organizational structure and sources of funding. This course also examines the elements of nonprofit staff and volunteer recruitment and management in the sport industry.
Diploma	Accounting – Business – Transfer To UOIT Bachelor Of Commerce (HONS)	BUSI 1102 U	<b>Critical Thinking &amp; Ethics</b>	This course explores the process of thinking critically and guide students in thinking more clearly, insightfully and effectively. Students will develop the abilities to solve problems, analyze issues, and make informed decisions. Some of the development of these skills will occur in a business ethics environment where students will apply their thinking skills to moral dilemmas they may face in their professional and personal lives. The blend of thinking and ethics will provide a rich environment for developing an approach to addressing challenges that face the business world, including (but not limited to) the environment and diversity.

**School of Business, IT & Management (BITM)**

Level	Program	Course Code	Course Title	Course Description
Diploma	Accounting & Payroll	ORGB 2200	Organizational Behavior	This course examines and explores how individuals interact with others within an organization, and how managers can use knowledge of individual needs and motivational factors to develop and improve organizational performance. Included is the review of how individuals perceive themselves and others, motivational theories and application, team processes and dynamics, communication approaches, power and leadership theories, as well as approaches to organizational structure and culture.
Diploma	Accounting – Business	MGMT 1209	Introduction To Business Management	This course will cover a wide variety of introductory topics that relate to the management of a company or other organization. The course will focus on the factors that affect the success of businesses in Canada. It will review the entrepreneurial spirit and character it takes for individuals to start their own business. It will explore different kinds of business types and the way they compete in the global economy today. The course introduces management techniques, business planning, as well as ethical business practices. There will be brief coverage of the successful management of financial resources.
Diploma	Accounting – Business	ECON 1200	Macroeconomics	This course introduces students to the study of economics examining how countries, businesses, and individuals tackle the problem of scarce resources in order to satisfy needs and wants. The course introduces economic principles such as opportunity cost, demand, supply and the function of markets, and government intervention in markets. The course then emphasizes macroeconomic topics such as unemployment, inflation, economic growth, determination of national income, money and banking. In addition, government fiscal and monetary policies are examined with an emphasis on the Canadian economy.

Diploma	Accounting – Business	ECON 2200	Microeconomics	This course is an introductory course in microeconomics. The course starts with a review of basic economic principles which were covered in the ECON 1200 course including supply and demand and the operation of markets. The course then examines the microeconomic decisions of businesses by analyzing cost and revenue models. Production cost models for each type of competitive structure are studied including perfect competition, oligopoly, monopoly and monopolistic competition. Models for resource markets are also studied. The course then addresses the foreign sector, foreign trade and current global economic issues and their impact on domestic markets.
Diploma	Sport Administration (two-year)/Sport Management (three-year)	MGMT 4304	Volunteer And Non- Profit Management	This course provides students with an introduction to Non Profit Organizations, including an examination of organizational structure and sources of funding. This course also examines the elements of non-profit staff and volunteer recruitment and management in the sport industry.
Diploma	Finance – Business Administration	MKTG 2202	International Business	Through this course the student will come to understand the global business environment from both national and global perspectives. Topics include an overview of international business patterns and social systems and their effect on business. Different government systems, market structures and economic and legal systems will be examined along with the institutions that provide an international oversight. <b>Culture and ethics, and their effect on business, will be discussed as well as various trade theories and currency exchanges that facilitate global trade.</b> This will provide a framework for the creation of international business strategies necessary for success in the global marketplace.
Grad	International Business Management	BUS 2201	International Business Culture	This course will attempt to break down the conceptual, theoretical, and practical boundaries limiting our ability to understand and manage people in countries worldwide. It will examine cultural differences and their effect on business while focusing on strategies to address cultural variances for business success. There will be a focus on understanding the role of communication and developing approaches to ensure effective cross-cultural interaction.

Diploma	Business Fundamentals	HRM 2200	Human Resource Management II	This course focuses on the factors that affect the overall atmosphere in the workplace and that which contributes to an environment conducive to maximum productivity. It is an advanced course designed to give students who have decided to further their studies or major in Human Resources an understanding of the technical aspects of the Human Resources field. Students will study the following topics: orientation and training; performance management; compensation; employee benefits and services; labour relations; equity and diversity; and international human resources management. Successful completion of this course and HRM 1200 (with a minimum combined grade of 65%) will qualify as an approved credit towards the academic component of the Certified Human Resources Professionals designation (CHRP) granted by the Human Resources Professionals Association of Ontario (HRPAO).
Diploma	School of Bus, IT & Management	MKTG 4207	Digital Marketing	This course introduces a variety of web-based and digital marketing approaches. Students will examine the new and fast-changing opportunities for marketers resulting from the changing use of digital media, including search engine strategies, websites, social media, and mobile communication. The course provides students with the opportunity to observe, evaluate and recommend online marketing strategies with an emphasis on measurement of online marketing activity.

Diploma	Entrepreneurship and Small Business – Business (compressed)	HRM1200	Human Resource Management I	This course introduces students to the management aspects of Human Resources in preparation for advanced, specialized studies in the second and third years of the HR program. Specific focus is on the factors that affect the overall atmosphere in the workplace and which contribute to an environment conducive to maximum productivity. Students will be introduced to effective strategies for hiring, motivating, managing, and retaining staff. Students will study the following topics: the strategic importance of Human Resources and the role of the H.R. Manager; competitive challenges facing Human Resources; job analysis and design; Human Resources planning; recruitment and selection; health and safety; and employee rights and discipline. Successful completion of this course and HRM 2200 (with a minimum combined grade of 65%) will qualify as an approved credit towards the academic component of the Certified Human Resources Professionals designation (CHRP) or the Certified Human Resources Leader (CHRL) designations granted by the Human Resources Professionals Association (HRPA).
Diploma	Entrepreneurship and Small Business – Business	MGMT1209	Introduction To Business Management	This course will cover a wide variety of introductory topics that relate to the management of a company or other organization. The course will focus on the factors that affect the success of businesses in Canada. It will review the entrepreneurial spirit and character it takes for individuals to start their own business. It will explore different kinds of business types and the way they compete in the global economy today. The course introduces management techniques, business planning, as well as ethical business practices. There will be brief coverage of the successful management of financial resources.

Diploma	Sport Administration (two-year)/Sport Management (three-year)	SPAD 4303	Global Sport	Sport is a global phenomenon. The purpose of this course is to study the growth and development of sport internationally and to examine the profile of sports and sport systems of specific countries. Throughout history, sport has served many purposes. Sport has been used as a tool in the formation of nations, as a means to promote nationalism, as a route to forge international relations, as an instrument to improve physical and health education, and as a conduit of political ideologies. More recently, numerous international organizations have established initiatives to provide sporting opportunities for the citizens of developing nations in an attempt to improve the quality of life. As such, students will examine the impact of culture, politics and economics on global sport.
Diploma	Supply Chain and Operations Management – Business Administration	PURC 4200	Strategic Purchasing	Purchasing and supply management has become increasingly visible in a world where supply is a major determinant of corporate survival and success. The emphasis in this course is on developing, maintaining, and enhancing supplier relationships to optimize the supply chain and includes the following areas of study: supply process, legal and ethical parameters, price structures, cost management strategies, and strategies on developing and maintaining supplier relations. The course concludes with investigating various supply chain activities that supply managers are directly and indirectly involved in throughout the career. Various purchasing/supply tools and techniques are examined and practiced to provide a practical component to the course.
Diploma	BITM-Business Administration- Human Resources Advanced Diploma	ATCM 3133	Construction Material & Pro II	This course introduces the student to the basic materials and processes encountered in construction with reference to division 6-9, and 14 of the CSC National Master Specification "MasterFormat" system. The course provides information on the physical and chemical properties of materials, their manufacturing and fabrication processes, embodied energy, typical installation methods, efficiency of utilization and organization in a construction, repurposing & renovation projects. Also, the materials and products are evaluated in relation to their appropriateness as affected by their durability, performance and energy conservation. The focus of this course will be structural materials and components usually found in industrial, commercial and institutional construction.

**School of Health & Community Services (HCS)**

Level	Program	Course Code	Course Title	Course Description
GRAD	Addictions and Mental Health	ADDC 2506	Special Populations: Working With Diversity	This course is a continuation of the "Theories and Models" course and <b>focuses upon "diversity" in our society, culturally-sensitive psychotherapy and "gender-sensitive psychotherapies"</b> . The particular mental health and addictions needs and contextual issues related to minority groups is examined with specific emphasis on the segments of our society most often associated with focused psychotherapeutic needs including the LGBTQ community, Indigenous Peoples and ethnic minorities. Gender-sensitive psychotherapy includes an examination of Feminist Therapy. Students will gain an understanding of psychotherapeutic practice with these segments of our society with particular emphasis on "cultural competency" and "the Safe and Effective Use of Self" (SEUS).
GRAD	Addictions and Mental Health	ADDC 1506	<b>Psychotherapeutic Practices: Group Therapy</b>	This course provides students with an overview of the contemporary theories of group dynamics and group process which are required to provide effective group psychotherapeutic services in an addictions or mental health treatment setting. Throughout the course, a variety of theoretically grounded psychotherapeutic techniques which enhance the therapeutic potential of a counselling group will be discussed and demonstrated. These techniques will be integrated with those being explored and developed in the co-requisite course, Psychotherapy Practice I [ADDC1508]. The course also has a significant experiential component, which will provide students with the opportunity to experience the group process both as group members and as co-facilitators of a group session. Throughout the course, students will be asked to reflect on the impact of the 'self' on psychotherapeutic relationships and group process. The importance of developing 'cultural competence' in order to provide effective psychotherapeutic treatment when working with diverse populations will also be stressed throughout the course.
GRAD	Addictions and Mental Health	ADDC 2501	<b>Psychotherapeutic Practices: Addiction Treatment Strategies</b>	This course examines current Bio-Psycho-Social approaches to addiction treatment in clinical settings. In particular, the course is designed to allow students to learn and practice specific therapeutic techniques associated with Motivational Interviewing and Marlatt's Relapse Prevention model. Other areas of focus in the course include the role of Mutual Aid Groups in addiction treatment as well as the role of neurobiological factors and mental health symptoms in relapse behaviors. Emphasis in the course will be place on experiential learning in order to provide students with opportunities to develop their psychotherapeutic skills.

Diploma	Animal Care	ANIM 2202	Wildlife And Exotic Animals	This course provides students with basic knowledge related to the anatomy, behavior, health concerns, and general care requirements of a variety of exotic and native wildlife species. Proper species identification and behavioral enrichment will also be key topics of study. ANIM 2202 provides students with the fundamental skills needed to deal with native and exotic wildlife in a variety of professional settings, and offers a solid foundation for further study of these subjects.
Diploma	Animal Care	ANLE 1201	Animal Legislation & Ethics	This course introduces students to major theoretical frameworks related to ethics and reviews key pieces of legislation that impact the animal care industry in Ontario. Understanding ethics and legislation are important components to working in the field of animal care. It is also especially important to have a solid comprehension of personal ethics and how they relate to legislation that will impact your profession. The field of animal care offers particular challenges for workers in terms of ethical decision making. This course will help students gain an understanding of the laws that are most likely to impact their work and will allow them to explore their own ethical choices and gain confidence about their own decision making.
Diploma	Animal Care	NUTR 1203	Animal Nutrition & Wellness	This course introduces animal care students to the fundamentals of companion animal nutrition. It deals with the nutritional requirements and nutritional related ailments of a variety of domestic animals and livestock, as well as requirements of domestic exotic, captive wild exotic and captive wildlife. It provides an in depth look at foods offered by veterinary hospitals while also examining food from pet stores and grocery stores as well as other suppliers. Students will also learn how to appropriately read feed labels, and appropriately recommend what type of food to feed.
Diploma	Animal Care	ACIS 2203	Issues In Animal Care & Welfare	Society has debated various viewpoints related to animal welfare for centuries and there are still many topics that provoke passionate response from workers in this field and from the general public. This course will examine a variety of current issues and debates related to animal welfare on a local, regional, and global scale. Students will have the opportunity to explore questions related to these issues and develop their own perspectives.
Diploma	Child and Youth Care (compressed)	COUN 1509	Cyc Issues & Ethics	This course introduces students to the professional, ethical and legal issues facing Child and Youth Care Professionals. Through a process of self- reflection, students will also become more aware of their own personal values and how these values may potentially impact the therapeutic relationship with their clients. A process for ethical decision-making will be explored and this process will be applied to a wide variety of complex professional dilemmas.
Diploma	Child and Youth Care (compressed)	CYCA 5502	Diversity In Society	This course will help the students to develop a better understanding of people and communities whose experiences and backgrounds are different from their own. They will gain an appreciation for the world's diversity and an understanding of how diversity impacts power and privilege. The course will also provide the students with opportunities to explore and challenge their personal, as well as professional values, and the impact they have in building positive relationships with diverse communities.

GRAD	Communicative Disorders Assistant	SPEC 3509	Populations With Special Needs	<p>CDA's require the knowledge to provide communication intervention to clients with special needs. Students examine current trends and issues related to individuals with disabilities, including an overview of a variety of disabilities, their characteristics and management.</p> <p>Topics include underlying pediatric conditions that affect communication and the particular communication and associated challenges of children and adults with developmental disabilities, Down Syndrome, cleft lip and palate, cerebral palsy, multiple disabilities, hearing impairment, Autism Spectrum Disorders, learning disabilities, attention deficit disorders, environmental deprivation, etc. Students are exposed to a sampling of screening and assessment tools and reports, intervention activities and strategies reflective of various treatment approaches for clients with special needs. The role of the Communicative Disorders Assistant in implementing program recommendations for clients with special needs is emphasized.</p>
GRAD	Addictions and Mental Health	ADDC 2502	Lifestyle & Wellness: Psychoeducational Groups	<p>This course examines models of wellness counselling in the context of addictions/mental health treatment and introduces the student to psycho-educational counseling. Special attention will be paid to the 'Psycho-education' model and instructional strategies focused on behavioral change. The course will focus on strategies which allow the counsellor and client alike to develop and maintain a balanced and healthy way of life. As such, models and methods focusing on systematic behavior change will be an area of focus. The evolution of the concept and practice of wellness will also be explored as will specific dimensions of wellness such as stress management, self-esteem, social relationships, physical activity and nutrition.</p> <p>The course also has a strong focus on the honing of group counselling skills in order to facilitate the effective delivery of wellness-based psycho-education sessions. As such, students spend much of the course developing and practicing the delivery of psycho-education sessions, including the opportunity to develop and conduct a psycho-educational workshop for a clinical population in the community</p>
Diploma	Occupational Therapist Assistant/Physiotherapist Assistant	COMH 2303	Concepts In Mental Health	<p>This course introduces students to the area of psychiatric disability both as a primary diagnosis and as a secondary diagnosis in those with physical disability. Students become familiar with characteristics of psychiatric disability and the general management of the more common disorders. The role of the assistant is examined, with particular emphasis on the client-centred rehabilitation approach. Students also have exposure to methods of service provision in mental health practice. The Mental Health System is described and related issues are explored, giving a broad perspective on mental health/illness.</p>

Diploma	Community Services and Child Studies Foundations	CSSP 2503	<b>Special Populations In The Community</b>	This course offers the student the opportunity to become familiar with a wide range of special populations in our society which require assistance. These include children, the aged and people with disabilities. There will also be a strong focus on gaining an understanding of the various community agencies which serve each special population.
Diploma	Community Services and Child Studies Foundations	GNED 1407	<b>Introduction To Sociology</b>	Sociology is the study of people and how they interact with each other and various social groups. This course deals with the study of people's lives, their relationship to society as a whole, and how people are affected by the society in which they live. The concepts, theories and methods of the discipline will be introduced and discussed with particular emphasis on the dynamics of Canadian society and Canadian social problems.
Diploma	Community Services and Child Studies Foundations	WESC 1000	<b>Wellness &amp; Self- Care</b>	This course will support the student in understanding the importance of taking care of oneself in order to be the most effective care giver to others. Students will examine their own social, emotional, mental and physical health and wellness. The topics discussed will include stress management, nutrition exercise, personal physical care, addictions, mental and emotional stresses and social supports. Students will have an opportunity to develop a wellness plan in order to be optimally prepared to move forward in the helping professions
Diploma	Dental Assisting (Levels I and II)	SPEC 1502	<b>Diverse Populations</b>	This course introduces the dental assisting student to diverse populations they may incur in the dental office. Emphasis is placed on management of the pediatric client during dental care procedures. The Dental assistant student will also gain understanding of the unique challenges that special needs, seniors and culturally diverse individuals may face regarding dental care. The role of the Dental Assistant in a public health setting will also be discussed.
Diploma	Dental Hygiene	PODI 4500	<b>Populations &amp; Diversity</b>	This course increases the dental hygiene student's knowledge and comfort with delivery of dental hygiene care with diverse client populations. The course will help the student adapt management skills and customize the process of care to meet the client's needs. In addition, the importance of collaboration with other health care providers to support quality of care will be discussed. The course will examine cultural awareness and competence, cross cultural concepts in health and health promotion with relevance to developing dental hygiene skills to a cultural sensitive practice. Students will also learn how to recognize, evaluate and report family violence and abuse.
Diploma	Developmental Services Worker	DSWH 1503	<b>Health &amp; Well Being</b>	Students will examine the Social Disability Model and Hettler's Dimension of Wellness Model to explore individual and social issues related to disability and wellness and how a system of inequality produces illness and disablement. Emphasis will be placed on the knowledge of developmental principles and disabilities, values and skills necessary to promote, health, safety, and wellness at home and in the work environment. Strategies will be explored to optimize health and well-being for persons with disabilities; and students will gain an appreciation for the importance of the interaction of the mind, body and spirit. Students will be provided with a working knowledge of human anatomy and physiology. Active living, nutrition, sexuality, social relations and promoting a healthy lifestyle will be addressed.

Diploma	Developmental Services Worker	DSWF 2503	Family & Social Systems	This course provides students with an overview of characteristics of the family which includes recognizing the strengths and challenges of the family, and the ways that Developmental Service Workers can create partnerships with families to provide family centered supports, programs, and services. Students will examine the meaning of the concept "family" and the characteristics of family within the context of a Family Systems model. The meaning of cultural competence from a historical and diversity perspective will be explored. Students will learn about traditional and evolving family roles and functions; as well as, contemporary topics such as love and marriage, parenthood, work and family life, poverty, stress and violence. Working with families within a collaborative team approach to achieve positive outcomes will be addressed. Students will explore social policy, legislation, and the types of services available to people with developmental disabilities and their families in Ontario.
Diploma	Developmental Services Worker	DSWP 2504	Person Centered Planning	This course introduces students to a variety of person centered planning strategies. Using a respectful and holistic, person-centered approach, students will learn to promote and support self-advocacy and self-determination for people with developmental disabilities. The goal is to investigate ways that support personal empowerment to achieve the desired lifestyle of the person.
Diploma	Developmental Services Worker	FWP 2502	Field Placement I	This field placement will provide the student with the opportunity to interact with people with developmental disabilities, gain experience in working in the developmental services field and increase awareness of the roles and responsibilities of a developmental services worker. It will focus on meaningful interactions with people who have developmental disabilities and the development of strategies that will facilitate a good quality of life. The co-requisite seminar course, FWPS2503, will provide the student with opportunities to discuss and reflect upon field placement experiences
Diploma	Early Childhood Education	CHLD 1302	Guidance Of The Young Child	Early childhood professionals play an important role in creating inclusive and responsive learning environments to benefit all children and families. Central to this role is recognizing the value of all relationships that nurture children's development, their sense of self and promotes pro-social behaviours. The philosophical tenets of responsive and authentic relationships will be explored within various theoretical frameworks. The learning environment is celebrated as a "teacher" because of its significant influence on children's development, sense of belonging and well-being. The organization of space optimizes the potential for indirect guidance, inquiry and engagement. The physical space is constructed to facilitate children's development of self-regulation and independence. Students will gain insight into the characteristics of quality environments for young children.
Diploma	Early Childhood Education	CURR 2501	Curriculum Development II	Students use the principles and guidelines of curriculum development to design developmentally appropriate and inclusive programs for preschool and school-aged children. Emphasis is on the roles of play, creativity, literacy and planning for the holistic development of children. Students explore a variety of subject areas relating to physical and social/emotional development.

Diploma	Early Childhood Education	HLTH 2305	Personal And Professional Wellness	This course will focus on promoting and supporting the mental health and well-being of children and child care practitioners. It will provide development information, strategies to foster healthy social and emotional development and identify stress management techniques to better support the mental health of both children and teachers.
Diploma	Early Childhood Education	ECE 2302	Ethics And Professional Practice	Throughout this course, students will learn about the professional organizations, standards of practice and ethical responsibilities of Registered Early Childhood Educators. Students explore issues and develop strategies to determine the nature of their professional responsibilities.
Diploma	Early Childhood Education	ECE 4300	Philosophies Of Ece	This course encourages students to examine various philosophical approaches to early childhood education with a view to developing and stating their own philosophy. The course content addresses both historical and current factors in the development of theoretical perspectives. It focuses on comparing and contrasting some theories which differ dramatically in their approaches to early education.
Diploma	Fitness and Health Promotion	HLTH 1310	Introduction to Wellness	This course provides a thorough introduction to the concepts of wellness and holistic health. Emphasis will be placed on the relationship between self-responsibility and self-improvement, as well as the role of the fitness and health professional in promoting specific wellness programs.
Diploma	Fitness and Health Promotion	BIOL 2302	Exercise Physiology II	The emphasis of this course is on the essential knowledge of the structure and function of the human body. This course is a continuation of Physiology I and completes the study of the organ systems of the human body. Specific body systems studies are: Nervous and Endocrine. The influence of environmental, nutritional, fluid balance and ergogenic aids on performance in exercise will also be examined with a strong emphasis placed on the synergistic relationships of the body systems for the purpose of maintain homeostasis.
Diploma	Fitness and Health Promotion	FITS 3300	Fitness Assessment I	This course utilizes the CSEP-PATH (Physical Activity Training for Health) protocol to introduce the student to a safe and practical fitness assessment. The student will be able to gather and apply information about a client's physical activity, fitness and lifestyle to inform the development of client- centered action plans for healthier living.
Diploma	Fitness and Health Promotion	MKTG 3305	Marketing & Entrepreneurship	Students will develop an understanding of the basic principles of marketing and entrepreneurship and the fundamentals of promoting fitness and health products/services from a business stand point. Content is presented from a marketing perspective with a focus on features and strategies unique to the fitness and health promotion industry.
Diploma	Fitness and Health Promotion	HLTH 4303	Holistic Wellness Applications	This course is designed to introduce the student to the holistic techniques and modalities that have become popular in the wellness industry. Emphasis will be placed on holistic therapies used for disease prevention and management, and improving functional fitness. How these modalities may be included in corporate or personal wellness programs will be explored through guest speakers, debates, current wellness news events and research discussions.

Diploma	Personal Support Worker	PSWH 1500	<b>Health Promotion And Development Across The Lifespan</b>	Students learning concepts which help them maintain a safe and comfortable environment for the client of all ages, their families and self. Includes: Infection control, holistic approach, diversity, growth and development norms, nutrition and household management, fire safety, an understanding of OH&S and application for self and others, falls prevention, and a focus on Gerontology Care for the aging population.
Diploma	Personal Support Worker	PSWG 2500	<b>Health Challenges And Support Special Needs</b>	In this course the student learns about common health challenges facing individuals across the life span. Topics include supportive strategies to assist the client with these challenges. Concepts of prevention, maintenance and rehabilitation will be addressed. The student will explore care of the individual with special needs, adaptive devices and available community resources.
Diploma	Personal Support Worker	MECA 1500	<b>Mental Health Challenges</b>	In this course, the student will explore the changing face of mental health in Canada and the evolution of care for those who suffer with cognitive impairment. The student will learn about challenges experienced by individuals and their families who are coping with cognitive impairments such as delirium, dementia and delusions and selected mental health challenges such as depression, suicide ideation, bipolar disorders, anxiety, obsessive-compulsive disorders, schizophrenia and substance abuse. The student will explore strategies for communicating with and caring for individuals with these health issues using different models of care to manage the challenging behaviours in a safe and respectful way. Additionally, the student will become familiar with individual and community resources available to support the families and caregivers of those coping with cognitive impairment and/or mental health issues.
Diploma	Practical Nursing	NURS 3527	<b>Health &amp; Healing III - Community</b>	This clinical course focuses on applying theory learned in NURS 3527. Students will demonstrate caring, competency, connectedness, health promotion, critical thinking, problem solving and professionalism as they plan and implement care for clients (individuals, families and groups) in a community health setting.
Diploma	Practical Nursing	NURS 4506	<b>Health &amp; Healing IV</b>	This course focuses on Health Challenges across the Lifespan. These challenges include acute, chronic and terminal conditions which affect individuals from birth to death. The nursing process will be used in learning the content of the course, incorporating assessment, planning, implementation, and evaluation of disorders. Concepts to be covered include caring for the client with regard to psycho-social needs, cultural diversity and health teaching. Evidence informed practice and decision making are critical components of the course. The partnership between the inter-professional health care team will be explored in Practice settings used in the co-requisite practicum course will include acute care surgical and medical areas.
Diploma	Practical Nursing	NURS 1520	<b>Development Of Self I</b>	This course introduces students to the concept of nursing as a profession and the responsibilities/accountability inherent with this role. The College of Nurses of Ontario role, Professional Standards and the Practice Standards and Guidelines are studied as the students learn the importance of safe, competent and ethical nursing care. Evidence informed practice is emphasised through learning about critical thinking, ways of knowing, reflection and research. Caring as a theoretical basis of nursing is explored. The mandates of the RPNAO and unions are also introduced. Students will be supported in gaining skills to be successful at College.

**School of Health & Community Services (HCS)**

Level	Program	Course Code	Course Title	Course Description
Diploma	Developmental Services Worker	DSWS 1502	Introduction To Development Services	This course introduces students to a wide variety of topics and perspectives that are fundamental to the field of developmental disabilities. Students will acquire a working knowledge of the philosophies, changing attitudes, legislation and history of the movements. The role of advocacy and core values of inclusive community, person- directed support that facilitates participation <b>and empowerment of persons with diverse abilities</b> will be included.
Diploma	Fitness and Health Promotion	BIOL 1302	Exercise Physiology I	The emphasis of this course is on the essential knowledge of the structure and function of the human body. The course begins with an orientation to the human body, the levels of organization within the body, an overview of bioenergetics and the importance of synergist relationships between body systems. The concepts of metabolism and homeostasis will be introduced. Specific body systems studied are: skeletal, muscular, cardiovascular and respiratory.
Diploma	Fitness and Health Promotion	PSYC 3300	Counselling Techniques	This course provides a broad overview of counseling skills and theory that students can use to respond effectively and responsibly to client needs. Students will learn how to guide clients make decisions about behavioral change and motivational strategies. Additionally, this course will cover the importance of communication, how to understand and use the process of communication, and the importance of managing conflict.
Diploma	Fitness and Health Promotion	FITS 4302	Fitness Class Leadership II	This course will strengthen the student's skills and knowledge in a variety of group exercise classes and will address many aspects of group exercise instruction. The student will participate in and critically evaluate a variety of group exercise modalities in order that they may have a greater depth of understanding of various group exercise modalities, provide accurate and appropriate client referral and attain the skills necessary to effectively monitor and develop group exercise programming in a fitness facility.
Grad	Gerontology –Activation Co-ordination	ACEC 1305	Effective Communications For Working With The Elderly	In this course students will gain communication skills that are critical for allied health professionals. Emphasis is placed on ways to communicate specific to working with the older adult who may have barriers to communication and also how to communicate in the health professional workplace are explored. Various communication theories and challenges are studied followed by suggestions and guidelines to help you work your way to effective communication. Development of a communications portfolio will highlight this course.

## School of Interdisciplinary Studies (IS)

Program	Course Code	Course Title	Course Description
IS-General Education elective to be delivered across all programs	GNEDE 1426	<b>Cultural Diversity in Canada</b>	Students will critically identify and examine issues in diversity. Specifically, students will focus on topics pertaining to inequality in various social settings, including but not limited to race, gender, ethnicity, class and sexual orientation. Incorporating social/legal explanations of diversity, students will develop a clear understanding of the impacted groups and possible strategies for community empowerment.
IS-General Education elective to be delivered across all programs	GNEDE 1208	<b>Cultural studies - film</b>	This course is a study of theoretical perspectives and debates in cinema and culture. Students focus on the cultural impact of cinema and how it impacts the audience, industry and reflective works. Students will be evaluated on their ability to research, analyze and present theories related to these topics.
IS-General Education elective to be delivered across all programs	GNEDE 1413	<b>Current Affairs</b>	Current Affairs is about the world in which we live and the events that shape and influence our lives. Students will be introduced to important events that have happened during their lifetime, and whose repercussions will shape the world that they live in. Along the way, students will learn about the geography, politics, and history of some of the most active regions of the world. They will learn how to think critically, understand multiple sides of an issue, and come to logical conclusions about current events.
IS-General Education elective to be delivered across all programs	GNEDE 1435	<b>Deviance</b>	Deviance is the study of actions and behaviors that violate social and legal rules and expectations. In this course we will explore and analyze a variety of theories to explain deviance and how deviant behavior is classified. As a community of learners we will investigate interpersonal violence, self-destructive deviance, diverse lifestyles, substance use and abuse, and inequality in deviance. Through this investigation students will gain greater insight into diverse forms of deviance including family and school violence, suicide, mental disorders, alcoholism, serial murders, and sexual deviance.
IS-General Education elective to be delivered across all programs	GNEDE 1125	<b>Gender &amp; sexuality</b>	Students in this course will explore a variety of issues surrounding gender and sexuality in contemporary Western society: gender socialization, social and cultural norms, identity politics, social deviance and sexual shaming. Through an interactive blend of lectures, discussions and debates, students will broaden and challenge their understanding of the role(s) of both gender and sexuality in media, politics, religion and popular culture. Ultimately, this course also seeks to analyze the shifting landscape of gender and sexual politics and its relevance in this particularly important, controversial time in human history. Students will be evaluated using a combination of participation activities (short reflective papers, debates) as well two (2) tests, one (1) oral presentation and one (1) final paper.

IS-General Education elective to be delivered across all programs	GNEDE 1462	<b>The global class</b>	This forward-looking course, which has grown out of two popular Durham College electives, Short History of the World and Humanity's Destiny, concentrates on our shared human adventure on Earth. The Global Class explores our story, the human story, at a time of accelerating interdependence. Every other week in an online worldwide classroom, the course instructor (the "host" of The Global Class) and his students in Oshawa welcome a guest speaker from one part of the world along with classes from two other countries for a live intercultural exchange in which students have the opportunity to meet a provocative contemporary thinker and learn what their peers elsewhere have to say about a topic that affects them both globally and locally. The Global Class asks you to think about your place in today's world in which we are at once pushed by forces of globalization and pulled by local tradition. A website designed and managed by students is another feature of The Global Class. Students are evaluated according to reflective multimedia assignments that allow them to explore the course content in terms of their own goals, and quizzes they themselves design help them prepare for the classes with the participants in other parts of the world. You will find yourself challenged and inspired in this course
IS-General Education elective to be delivered across all programs	GNEDE 1108	<b>Human Relations</b>	This is an introductory level course that explores the dynamics of human relationships. Knowledge about interpersonal relations, behaviors, attitudes, and the self will be applied to one-on-one and group-type situations. The goal is to cultivate abilities that bring about empowerment, self-management, and effective teamwork to improve personal and professional efficacy. Opportunities are provided to think about the way in which people communicate—that is, to be reflective about the messages that people wish to convey and also how those messages may be interpreted or perceived by others.
IS-General Education elective to be delivered across all programs	GNEDE 1137	<b>Human Rights: A Radical Idea</b>	Human rights has emerged as a powerful idea in current times. The purpose of this course is to raise students' awareness of human rights issues and supply them with a foundation for understanding the historical, philosophical, and legal aspects of human rights. We will critically discuss ideological and cultural perspectives of human rights; sources of rights violations; the United Nations and non-governmental organizations; women's rights and gender equality; LGBT rights; indigenous rights; free speech and freedom of expression. In taking this course, students will develop a critical understanding of these issues and many others. They will hone their analytic skills by learning to uncover and question their own assumptions about these themes while seeking ways to address them in their personal and professional lives. Students will be evaluated through a combination of short assignments, projects, personal reflections, and essays.
CE-Police Foundations Diploma	Comm 2326	<b>Interpersonal &amp; Group Dynamics</b>	In this introductory level course, students learn to apply knowledge of interpersonal relations and group dynamics to working within a team. Emphasis will be placed on utilizing effective communication skills with individuals and groups. Group cohesiveness and group decision making will be discussed and applied.
IS-General Education elective to be delivered across	GNEDE 1429	<b>Introduction to Black Studies</b>	This course is a survey of the Black Studies discipline including its social and academic origins, goals and development. Emphasis is placed on providing students with an understanding of the fundamental areas of study within the field and of the interdisciplinary approach to studying the African experience in North America and the world.
IS-General Education elective to be delivered across all programs	GNEDE 1117	<b>Introduction to Psychology- A Behavioural Science</b>	Psychology is the study of human behaviour. This course is designed to increase student understanding of the basic principles that underlie behaviour. Through practical examples, students will be introduced to important psychological concepts and key research findings. The course examines such processes as: biology and behaviour, lifespan development and aging, cognition and language, personality, and psychological disorders and treatment.

IS-General Education elective to be delivered across all programs	GNEDE 1106	Introduction to Psychology - An Applied Science	Psychology is the study of human behavior. This course is designed to increase student understanding of the basic principles that underlie behaviour. Through practical examples, students will be introduced to important psychological concepts and key research findings. The course examines such processes as: biology and behaviour, sensation and perception, learning, memory, emotion, motivation, and social psychology.
IS-General Education elective to be delivered across all programs	GNEDE 1503	Issues and Ethics in Science	This course examines the nature of science and some of the technologies that have been developed using the scientific process. Every new technology affects society in some way, usually bringing hope, as well as potential problems for the future. By studying technologies from a historical perspective, to the present, and into future, students will be challenged to identify and analyze controversial issues associated with these developments. Topics include technologies relating to information and communication, biology and health (e.g. organ transplants, reproductive interventions, biotechnology and genetic engineering), and energy. Through discussions, research, and presentations, students will acquire a basic understanding of ethics, critical thinking and decision-making as they relate to developments in science and technology.
IS-General Education elective to be delivered across all programs	GNEDE 1119	Money matters	Should the government bailout car companies with your tax dollars? Why do we import beef from Argentina when we have lots here? Why does the Ontario government have such a large deficit – and what is a “deficit”, anyway? Do you feel lost when presented with complicated financial news stories or discussion about the world economy? In this course, students will learn how having an effective personal financial plan has consequences which can impact all of the above; how understanding economic principles and developing sound financial knowledge, both personal and societal provide a significant role in comprehending global financial economy. Students in this course will be evaluated using quizzes, assignments, and online activities.
IS-General Education elective to be delivered across all programs	GNEDE 1318	National security: terrorism	This course will expose the learner to the history, psychology, methodologies and motivations of the use of violence to achieve political and other objectives. The student will be exposed to an operational and strategic analysis of this social science phenomenon. Government anti and counter terrorism strategies and concepts will be presented as well as identifying terrorist groups, studying terrorist tactics and identifying the second and third order effects of terrorism.
IS-General Education elective to be delivered across all programs	GNEDE 1512	Paranormal and Pseudoscience	Students will learn to separate fact from fiction within topics such as astrology, ESP, telepathy, past-life regression, haunted houses, near-death experiences, superstitions, witchcraft, medical pseudoscience, and UFOlogy. What do you believe? Students will examine these paranormal and pseudoscience topics while learning about skepticism, reasons for belief, pseudoscience red flags, critical thinking, and how to evaluate evidence. Evaluation includes online quizzes, and assignment and discussion activities created with “two-minute” digital tools. Two-minute tools are free, work on any device, and take two minutes to learn (two-minute tutorial videos are provided). Examples include padlet.com, Google Apps for Education, word clouds, visual quotes, sway.com, infographic posters, and mind maps. Student work will be posted on class websites for sharing and formative assessment, and some learning objects will be collaboratively created by the class.

IS-General Education elective to be delivered across all programs	GNE D 1302	Political science	This course provides an introduction to the democratic system of governing people in Canada. It includes a description of the organization of the three levels of government: federal, provincial and municipal. The interaction of each government level, democratic electoral systems and legislative processes are also discussed. The course includes the responsibilities of each level of government, the daily problems and issues facing Canadian citizens, and the impact on law enforcement by public opinion, the media and special interest groups.
IS-General Education elective to be delivered across all programs	GNE D 1404	Popular culture and the media	In this course, students will answer the question "Why?" by using cultural analysis to connect what's "popular" to what's going on in our society. By taking a closer look at the movies and television shows they watch, the clothes they wear and the music they listen to, students will endeavor to understand the role of popular culture in maintaining and reproducing the kind of society we live in. What messages are intended by the producers of mass media and what messages are received by the consumers? Popular culture will be investigated from a sociological perspective with an emphasis on North America with Canadian content as available.
IS-General Education elective to be delivered across all programs	GNE D 1411	Social media & society	In a few short years, social media has profoundly changed the global communication landscape. With the advent of social media tools such as 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.
IS-General Education elective to be delivered across all programs	GNE D 1120	Stress, wellness & nutrition	Stress can play a huge factor in our professional lives. Learning how to deal with it is vital to our long-term health. While stress alone doesn't cause disease, it triggers molecular changes throughout the body that make us more susceptible to many illnesses. In this course, students will gain an understanding of the importance of how to deal with both positive and negative stress in their lives. By using wellness perspectives, each student will gain more insight into how he or she can control both internal and external stressors.
IS-General Education elective to be delivered across all programs	GNE D 1440	Feminine Beauty: In the Eye of the Beholder	Beauty is subjective and can be defined and influenced by a variety of different social and cultural factors. This course will explore beauty ideals across different cultures and time spans. How these changing beauty ideals influence the development of human relationships will also be examined.

START-Renewable Energy Technician Diploma	COMM 2105	<b>Energy Communications 1</b>	Today's employers give preference to job candidates who are team players with strong communication skills. This course will help students find their voice and develop their ability to work in teams, giving them the competitive advantage they need in today's job market. It will also strengthen reading comprehension, writing ability, and presentation skills, all of which are fundamental to success in college and in the workplace.
START-Renewable Energy Technician Diploma	COMM2126	<b>Energy Communications II</b>	This course is designed to reinforce and expand on the writing skills students require in the technical workplace and build upon knowledge gained in COMM2105. Students will learn to select and use appropriate research, language, layout and graphics for technical documents. Emphasis will be placed on: the process of completing any on-the-job writing assignment, the specific formats most often used, and related communication tasks such as oral presentations. To help reach these goals, the course will focus on the elements of clear writing following appropriate APA format, and the necessary critical thinking that must precede good writing.
IS-General Education elective	GNED 1122	<b>Ethics in your Daily Life</b>	Ethics can be defined as a code of behaviour for daily living. Students in this course will have opportunities to examine solutions to ethical situations in both their daily and their future professional lives.
IS-General Education elective to be delivered across all programs	GNED 1441	<b>Food for Thought</b>	Students in this course will center on expanding the knowledge of our continually changing food systems through studying academic essays that focus on issues arising from the question, "How should we eat?" There will be a focus on food as fundamental to the human experience, and will introduce students to the shifting interpretations, perspectives, challenges, governance issues, and future visions that shape the ethical issues surrounding food. As a result, this course will heavily examine the benefits of adapting a more environmentally friendly vegetarian lifestyle worldwide. By studying modern issues and developments surrounding food ethics, students will cultivate a new appreciation for where their food supply comes from, how it is brought to their plates, and how to make more conscious food choices that will benefit themselves, others, and the environment. This course will be delivered in a fully online format. Students in this course will be evaluated using online discussions, study questions, and a cumulative assignment.
IS-General Education elective to be delivered across all programs	GNED 1521	<b>Greening Your Life: Becoming an Environmental Citizen</b>	This course introduces students to basic, non-scientific environmental lifestyle changes that can help them improve their own lives and the environment around them. Students will learn about ways they can alter their lifestyle to lessen their impact on the Earth and live more harmoniously with the natural world. Students will learn through a variety of activities including written/video lectures, online readings, reflective exercises and interactive web-based activities. As an online course students will be expected to have access to a computer and the Internet and will be expected to complete some online research.
IS-General Education elective to be delivered across all programs	GNED 1459	<b>Introduction to Aboriginal Culture</b>	This course will provide students with an introduction to Aboriginal (First Nations, Metis and Inuit) culture and world view from a historical basis leading up to current day. Through exploration of various topics pertaining to Aboriginal Peoples, students will gain a better understanding of issues in addition to contributions Aboriginal Peoples have made in Canada. Aboriginal perspectives will be introduced through traditional teaching methods and guest speakers. Students will be evaluated using a variety of assignments, projects, participation in discussion boards and tests.

IS-General Education elective to be delivered across all programs	GNE1407	<b>Introduction to Sociology</b>	Sociology is the study of people and how they interact with each other and various social groups. This course deals with the study of people's lives, their relationship to society as a whole, and how people are affected by the society in which they live. The concepts, theories and methods of the discipline will be introduced and discussed with particular emphasis on the dynamics of Canadian society and Canadian social problems.
IS-General Education elective to be delivered across all programs	GNE1506	<b>Natural disasters</b>	In this course students will be introduced to several major natural disasters, including earthquakes, tsunamis, volcanoes, tornadoes, hurricanes, ice storms, floods and avalanches. Students will research, prepare and demonstrate an understanding of why and how these natural disasters occur, and how the average person is affected. They will illustrate their understanding of the topic through essays and projects.
IS-General Education elective to be delivered across all programs	GNE1139	<b>Personal Wellness</b>	Stress can play a huge factor in our professional lives. Learning how to deal with it is vital to our long-term health. While stress alone doesn't cause disease, it triggers molecular changes throughout the body that make us more susceptible to many illnesses. In this course, students will gain an understanding of the importance of how to deal with both positive and negative stress in their lives. By using wellness perspectives, each student will gain more insight into how he or she can control both internal and external stressors. In addition each student will be exposed to the latest information concerning diet and nutrition.
IS-General Education elective to be delivered across all programs	GNE1511	<b>Plagues, Poverty &amp; Peoples</b>	We live in an interconnected world amid killer germs, epidemics, and pandemics. Students in this course will explore the origins and impact of plagues on human societies, past and present, from various social, cultural, and biological perspectives. Topics to be covered include both historical examples such as the Black Death, Smallpox and Cholera, and contemporary examples such as HIV/AIDS, Malaria, and the evolution of Antibiotic-Resistant Bacteria. To conclude the course, students will examine the current Diabetes/Obesity epidemic, Metabolic Disorders, Stress, as well as, Mental Health and Addiction disorders in contemporary Canadian society. Students will have an opportunity to illustrate their knowledge and understanding by completing various in class activities, tests, info graphic, and through participation in group discussions and presentations
IS-General Education elective to be delivered across all programs	GNE1132	<b>Positive Psychology: The Quest for Happiness</b>	It could be said that one of the main goals in life is to "be happy", but what does that really mean and how do we achieve that goal? Positive Psychology is a newer branch of psychology that seeks to answer those very questions, as well as to provide us with a pathway for our own, personal happiness. In this course, students will develop a greater understanding of how long-term happiness differs from the short-term happiness we get from buying "stuff". They will explore and debate reasons for the decline in our happiness levels, including the rise in both materialism and technology use. They will increase their awareness of how personal happiness is dependent upon our relationships with other people, both near and far. In addition to developing a deeper understanding of the science of happiness, students will also experiment with some research-based happiness strategies within their own lives. By the end of this course, students will not only be more informed about what happiness is, but they will have the strategies and tools needed in order to achieve personal happiness throughout their lives.

<p>IS-General Education elective to be delivered across all programs</p>	<p>GNEC 1141</p>	<p>Understanding human intelligence</p>	<p>The concept and measurement of human intelligence has been around for thousands of years, but how much more do we know about it now than we did back then? More importantly, why do we continue to measure human intelligence and how is it related to our achievements in life? Perhaps success is not actually about how SMART we are, but about HOW we are smart? In this course, students will learn about traditional and contemporary theories of human intelligence. They will discuss and debate the role of intelligence testing in modern society, and will explore new brain based methods of understanding human intelligence. Controversial intelligence issues will be presented and explored. Factors that contribute to the development of human intelligence will also be examined, including creativity, wisdom and academic ability. Throughout the course, students will extend their personal and professional connection to the content through the use of individual ePortfolio assignments. By the end of this course, students will not only have gained more understanding about human intelligence, but they will have developed a greater self-awareness.</p>
<p>IS-General Education elective to be delivered across all programs</p>	<p>GNEC 1526</p>	<p>Water: the weirdest liquid</p>	<p>Water is the most unusual liquid in the world and it is found everywhere. It covers 70 % of the world; 2/3 of your body is composed of water. It's even found in outer space. It is, however, increasingly difficult to find clean water for large parts of the world. While many people have no access to clean water, corporations in North America make a profit from this precious resource. Students will examine topics ranging from the unusual chemical properties of water to climate change, and the politics and ethics of water ownership. Students will also have an opportunity to illustrate their knowledge and understanding by completing various online in-class activities as well quizzes, assignments, and group work.</p>
<p>IS-General Education elective to be delivered across all programs</p>	<p>GNEC 1449</p>	<p>Women Across Cultures: A Global Perspective</p>	<p>In this course students will look at the experiences of women globally, especially in developing countries. Topics that students will explore include status and power of women, their role in the home and the workplace, sexuality and reproduction, and issues (such as violence and female circumcision) and practices unique to certain countries. Exploring the aspects of women's lives globally is done by the consistent reference to the overall context of gender relations generally; thus the issues affecting women are examined in relation to the experience of their male counterparts. In addition, students will be encouraged to make comparisons between women's lives and situations in North America and the women's lives being explored in a global context. Students will be assessed using a combination of discussion board postings, assignments, tests, and projects.</p>
<p>IS-General Education elective to be delivered across all programs</p>	<p>GNEC 1427</p>	<p>Introduction to Women's Studies</p>	<p>This course will provide students with an introduction to the study of women, feminism and the theories of oppression and privilege that exist in our society, particularly with respect to gender, sexuality, race, class and sexual orientation. Topics will include the history of the women's movement in North America, gender socialization, sexuality and intimacy, body image, and health and reproduction with an emphasis on the social institutions of the family, health care, the legal system, work and the economy, and the media.</p>

<p>IS-General Education elective to be delivered across all programs</p>	<p>GNE 1522</p>	<p><b>You Are What You Eat</b></p>	<p>This course introduces major concepts in nutrition and diet to students in various disciplines, who have limited or no background in the biological sciences. The overarching goal is to develop a working understanding of the basic science of nutrition and apply this knowledge to personal health and professional settings. The course begins with the fundamentals of nutrition and diet, focusing on macro- and micronutrient intakes and needs throughout the life span. Food-based nutrition is discussed, alongside dietary guidelines from multiple perspectives, as well as recommendations and food labels. A focus on the role of nutrition in chronic diseases of lifestyle, as well as in cancer, will lead to critical analyses of various diets. Students will implement what they learn in the course into a personal diet change plan which will become a final assignment for the course.</p>
<p>IS-General Education elective to be delivered across all programs</p>	<p>GNE 1513</p>	<p><b>Global Warming</b></p>	<p>There are those who deny global warming and there are those who support global warming. Students in this course will examine the current debate surrounding this generation's most pressing environmental issue. Students will begin by investigating the causes of both natural and human-influenced climate change, from historical temperature trends to our modern fossil-fuel-driven society. Through local and global case studies, students will then explore the potential short-term and long-term consequences of global warming to vulnerable species, ecosystems, agriculture, and human societies in both developing and developed nations. Students will analyze the advantages and disadvantages of the possible solutions proposed by global warming believers and skeptics, including alternative and renewable energy strategies, national and international treaties, technological innovation, and lifestyle changes. Students will be evaluated using a variety of methods, including debates, presentations, online journals, discussions and tests.</p>
<p>IS-General Education elective to be delivered across all programs</p>	<p>GNE 1501</p>	<p><b>Environmental Protection and Global Wellness</b></p>	<p>Learn more about the prominent environmental issues of our time. This course will focus on timely issues in the environmental field that present varying degrees of risk to the health of humans, ecosystems and our planet. It will be a look beyond the media headlines at the policies, politics and basic science of our most interesting environmental challenges. Topics will include climate change, arctic ecosystems, water conservation and water quality, endocrine disrupting substances (gender benders), renewable energy, resource depletion, the dilemma of pesticide use and natural toxins. The course will begin with a brief look at the responsibilities of the federal, provincial and municipal governments as they relate to environmental matters. Then, each issue will be considered in the Canadian and global context.</p>
<p>IS-General Education elective to be delivered across all programs</p>	<p>GNE 1527</p>	<p><b>Artificial Intelligence</b></p>	<p>This course will explore the idea of artificial intelligence from three different perspectives: scientific, philosophical, and cultural. The scientific perspective will provide insight as to how artificial intelligence technologies work, the current limitations and supposed future potential. The philosophical perspective will allow us to discuss whether it is good or bad, essential or dangerous, and what the future could hold. The cultural angle will help us explore how society views artificial intelligence and whether these views are accurate. Toward the end of the course deeper topics will be introduced including how artificial intelligence compares to human intelligence, the singularity and futurism.</p>

## School of Interdisciplinary Studies (IS)

Program	Course Code	Course Title	Course Description
IS-General Education elective to be delivered across all programs	GNED 1104	Management & Leadership Skills	This overview course is designed to provide participants with a beginning-level understanding of management and leadership styles, and an opportunity to develop personal management skills. In today's changing economic and political climate, the role of a manager/supervisor is extremely demanding and complex. In addition to managing the many practical aspects of a business operation, he/she must provide leadership by motivating, empowering, and supporting staff. Topics include types of organizations, ethics, diversity, innovation, problem solving, and team building skills.
IS-General Education elective to be delivered across all programs	COMM 3712	Fundamentals of Interpersonal Communication	Complementing the foundations provided in Fundamentals of Personal Communication, this course focuses on developing student's interpersonal communication skills. Students in this course will explore how to resolve conflict and deal with difficult individual's/team members by using a variety of communication techniques and approaches. This course encourages students to identify different communication approaches to group work and effectively developing a work plan amongst a team, while ensuring that their ideas are being heard and considered by the group. Students are introduced to practical strategies for reviewing the work of others and providing constructive feedback when working as part of a team. Students will have a group presentation at the end of the course, where they will be demonstrating the communication skills, strategies and techniques gained.
IS-General Education elective to be delivered across all programs	GNED 1472	Special Topics in Sociology	The basic premise of sociology is that human existence is social existence. It is a diverse field, and Issues in Sociology will provide students with an understanding of sociology's unique perspectives, key concepts, and modes of exploring the social world. As well, Issues in Sociology will explore topics such as the interaction of people with each other and with various social groups, the environment and social change, gender issues, and health care and medicine. Concepts that will be explored include poverty, homelessness, issues affecting First Nations in Canada, population control, the environment and the impact of social media. Students will be evaluated using a combination of tests, assignments, term project and discussion board postings.
IS-General Education elective to be delivered across all programs	GNED 1308	Canadian Law - An Introduction	This introductory course is designed to introduce the student to the historical context and operation of our legal system, the institutions within the system, roles of persons within those institutions and the process of thought which applies to current Canadian legal issues. Students in this course should gain a general understanding of how laws are defined, created, implemented and interpreted to give meaning and solutions to modern social problems. Students will apply the function of law in a practical manner through case scenarios and/or case analyses. Students will be evaluated using a combination of mind maps, in-process assignments, discussions and/or debates participation, work sheets, quizzes and two assignments.

## School of Justice & Emergency Services (JES)

Level	Program	Course Code	Course Title	Course Description
Diploma	911 emergency and Call Centre	GNED 1408	Sociology & Canadian Society	What is sociology and how does it apply to everyday life? This course gives students the opportunity to learn about the invisible structure and organization of society which shapes individual and group events and experiences. As students come to understand how their culture shapes them, they also come to appreciate why individuals, groups and societies function as they do.
GRAD	Advanced Law Enforcement and Investigations	HLTH 1320	Advanced Fitness I – Law	Law enforcement fields require significant levels of physical conditioning. The successful student will achieve the level of physical training necessary through the completion of individualized fitness training and testing. The goal of this course is for a student to be able to achieve and maintain total physical fitness and sustain it throughout his or her career. The student will also learn how to deal with the stressors involved with the demands of working within a law enforcement agency. This is a hybrid course with gym time mandatory, theory, assignments and quizzes will be accessed through DC Connect. Students will be required to document their workouts in a fitness/log book provided by the instructor.
Diploma	Court Support Services	FAMY 1300	Courtroom Clerk/Registrar-Family I	This course will enable students to study the role of a courtroom clerk/registrar for family law cases in the Ontario Court of Justice, Superior Court of Justice and the Family Court. Students will learn courtroom decorum, conduct, and pre-, post- and in court responsibilities, in accordance with Ministry approved procedures, practices and guidelines. Students will be introduced to Family Law legislation and proceedings and learn the principles of case management, child protection timetables and their relationship to the Court's case tracking technology. Students will study First Appearance court (Rule 39 and 40).
Diploma	Emergency Services Fundamentals	LEAD 1400	Leadership	Leadership skills are an expectation and an asset in the provision of high-quality patient care. This course assists the student with the development of his or her own leadership style. Through an examination of leadership theory, group dynamics and behaviour, the student will learn how to successfully organize and lead groups through various activities.
GRAD	Mediation – Alternative Dispute Resolution	MEDT 1301	Intro To Mediation And Ethics	This is a foundational course where students will be introduced to the process of interest-based mediation. Students will begin to practice mediation skills and process in the classroom through extensive role-plays, de-briefs, and reflective journaling. Students will also be exposed to the basic ethical principles related to the field of mediation.

Diploma	Emergency Services Fundamentals	SENT 1301	Sensitivity Training	Canada is a country that is constantly evolving amid the vibrant mosaic of human and cultural diversity. Inclusiveness, education, self-awareness and empathy are vital to achieving personal, political and community growth and development in our society. As first responders it is crucial to develop and enhance our understanding of human and cultural diversity in Canada. This course encourages respectful and "courageous conversations" that critically examine and unpack issues as they relate to prejudice, stereotypes, personal bias, racism, privilege, oppression, shame, also systemic barriers, challenges and solutions to an inclusive society.
Diploma	911 emergency and Call Centre	ETHC 1301	Ethics	Ethics was once defined as what one would do when nobody else was looking. In today's work environment, ethical behavior is receiving greater attention given plentiful media coverage of lapses in decision making. This course will facilitate students' conceptual understanding of ethical ideas, and provide opportunities to practice ethical decision-making through scenarios and case studies
Diploma	911 emergency and Call Centre	DIVS 1301	Diversity & Intrapersonal Communications	This course introduces students with the opportunity to acquire the skills and knowledge to deal with a diverse range of people. Students will focus on topics pertaining to the achievement of equity in various social and work settings including, but not limited to, race, gender, ethnicity and sexual orientation. With diversity as a backdrop, students will develop a clear sense of their own attitudes, beliefs and values. This course will deal with social issues of diversity and will identify possible strategies for empowerment in the workplace.
Diploma	Law Clerk Advanced (fast-track)	LAW 1310	Land Planning & Municipal Government	Students learn about the municipal government's role, particularly in land planning. They examine Section 50 of the Planning Act, which regulates land division. As well, students prepare consent and variance applications and review the land division and development regulation processes
Diploma	911 emergency and Call Centre	HLTH 2300	Lifestyle Management	Stress can play a significant role in people's professional lives. Learning how to deal with stress is vital to long term health. While stress alone does not cause disease, it triggers molecular changes throughout the body that make people more susceptible to many illnesses. In this course, students will gain an understanding of the importance of how to deal with both positive and negative stress in their lives. By using wellness perspectives, each student will gain more insight into how he or she can control both internal and external stressors.

Diploma	Emergency Services Fundamentals	ETHC 1307	Emsf Ethics	Ethics was once defined as what one would do when nobody else was looking. In today's work environment, ethical behavior is receiving greater attention given plentiful media coverage of lapses in decision making. This course will facilitate students' conceptual understanding of ethical ideas, and provide opportunities to practice ethical decision-making through scenarios and case studies.
Diploma	Law Clerk Advanced	ETHC 3303	Ethics And Professional Responsibility	This course focuses on the various rules of conduct which are applicable to legal support professionals in Ontario. Emphasis will also be placed upon the common ethical dilemmas encountered in the professional legal environment. This course will also assist students in clarifying a values system, establishing an ethical decision-making framework, while using these tools in application of the various rules of conduct to their role as a legal support professional.
Diploma	Paramedic	FITS 1401	Paramedic Fitness And Wellness	This course provides the student with long-term strategies for the maintenance of fitness and well-being as it applies to their personal and professional lives. An emphasis will be placed on critical thinking and reflection with respect to individual strengths and weaknesses. Students participate in the development of a physical readiness program with attention to proper body mechanics.
Diploma	Paramedic	FITS 2401	Paramedic Fitness And Wellness 2	This course extends the concepts of Fitness and Wellness acquired in FITS 1401. The focus of study will move from a general fitness and wellness perspective to a more specific perspective related to the Paramedic profession. This will include the completion of a Paramedic Fitness Test.
Diploma	Paramedic	ETH 4400	Paramedic Ethical Issues	Paramedics often find themselves in the position where they are forced to make a critical ethical decision, that is, a decision regarding what is right or wrong, or even more simply, good or bad. Decisions of this nature are a part of life, influence people every day, be it in their personal or professional lives. Paramedics can choose to avoid these decisions, but avoidance is a form of decision making. People can pretend to minimize them, saying, for instance, that as a paramedic, that person had to make "a patient care decision." Yet, here too, the ethical content of the decision persists, no matter how people may wish it away. Therefore it is important to become familiar with ethics or ethical systems of decision making to muster reason in helping make the best possible moral choice. This course will explore philosophies to help people make better ethical decisions. In so doing, students will consider what a good or "better" ethical choice is in the first place. Choices always involve free behaviours, serious behaviours, and justification for subsequent or past actions ? accepting challenges to the framing of ethical behaviour and seeking to explain the reasons for choices.
GRAD	Victimology	DIVS 2300	Diversity And Victimology II: Understanding Populations	This course will allow students to gain understanding of specific populations of victims, as represented in the culturally and ethnically diverse Canadian landscape. Students will learn of systemic frailties and strengths in the treatment of victims and the importance of balanced attitudes on the part of service providers. Racial, cultural, socio-economic factors will be examined, and specific victim populations will be explored.

**School of Media art and design (MAD)**

Level	Program	Course Code	Course Title	Course Description
GRAD Certificate	Advertising – Digital Media Management	INAD 5501	Content Management I	Understanding and using the research methods necessary for developing content aimed at particular audiences is critical to achieving specific outcomes. This includes matching content types, formats, and styles that have the best resonance with audiences. Technical skills learned will include the creation of content calendars and brand editorial guidelines, as well as familiarity with Search Engine Optimization (SEO), Search Engine Marketing (SEM), Google Analytics, mobile environments and apps.
GRAD Certificate	Advertising – Digital Media Management	INAD 6501	Content Management II	This course will provide students the knowledge they require to develop an effective content marketing strategy. Students will learn how plan, track, research, and create an optimized content strategy. Students will review content strategies for targeting, content variety, and content quality against case studies. Students will be introduced to different types of programs the different communication channels and organizational methods used to deliver the best content marketing strategy for a client. They will use skill learned in Content Management 1 to create a content marketing program for a "mock" client. They will learn how to deliver on brief and manage and measure the performance of their program. Attention will be given to acquiring the skill of creating a full content strategy on brand and work with the "mock" client to ensure they are meeting all criteria. By the end of this course, students will have the knowledge and skills required to execute and measure a content marketing strategy, which will provide them a full Content Marketing Strategy with special attention to process for their portfolios.
Diploma	Journalism – Mass Media	GNEC 1422	Media Law And Ethics	This course will explore two subject matters: media law and media ethics. It is an introduction to Canadian law and legal procedure in areas likely to be encountered by the working media. Topics include a basic overview of our legal system's history and functioning, the key role played by our Charter of Rights and Freedoms, contempt of court, confidentiality of sources, defamation, copyright, privacy, access to information, police powers of search, seizure, and arrest, and court orders like injunctions and subpoenas. You will analyze the major ethical issues facing journalists, including the public's right to know vs. an individual's right to privacy, free press vs. fair trial, community standards, becoming involved in the news, conflict of interest. Equivalent: GNEC 1422.

## School of Skilled Trades, Apprenticeship, & Renewing Technology (START)

Level	Program	Course Code	Course Title	Course Description
Diploma	Motive Power Technician - Service and Management	ELFL 3400	Auto Electrical And Fuel Systems 2	Instruction will be given in the following areas: Circuit calculations to verify Ohm's, Watts and Kirchoff's Laws with a selection of meters. Purpose, construction and principles of operation for diagnostic test equipment purpose, construction and operating principles, factors effecting cranking system operation and perform testing and diagnostic procedures. Principles of operation inspection and testing of electronic devices-purpose, construction, principles of operation, inspecting and testing for ignition fundamentals. Purpose, construction, principles of operation, inspecting and testing for charging systems and control units. Purpose, construction, principles of operation, inspecting and testing for electronic-controlled fuel injection systems. Principles of operation, inspecting and testing for emission control systems.
Diploma	START-Renewable Energy Technician	ENER 1050	Building as a System & Build Sci	This course stresses the evaluation of the house/building as a system. We study the various factors affecting the energy inputs and losses to the system. A comprehensive analysis of all the components of the system is required to develop a plan for the enhanced use of energy while maintaining a healthy environment. This course studies all the aspects of a building as a system in order that the students can appreciate the relative significance of each component. The students will learn the concepts of embodied energy of building components.
Diploma	Construction Carpentry - Sustainable	CCSA 1400	Construction Safety	This course covers the principles of the Occupational Health and Safety Act (OHSA) as applied to the carpentry trade as well as the knowledge and skills that will allow the students to work safely. The course includes Workplace Hazardous Material Information System (WHMIS) and an introduction to construction specific safety regulations (fall protection, scaffolding).
Diploma	Construction Carpentry – Sustainable	CCBS 2400	Building Science	This course stresses the evaluation of the house or building, as a system. Studies will include the various factors which affect the energy inputs and losses to the system. A comprehensive analysis of all the components of the system is required to develop a plan for the enhanced use of energy while maintaining a healthy environment. This course studies all the aspects of a building as a system in order for the students to appreciate the relative significance of each component. The students will learn the concepts of embodied energy of building components.
Diploma	Construction Carpentry – Sustainable	CCSB 4404	Sustainable Building Practices	Students completing this course will indicate a strong knowledge of sustainable building practices currently implemented into the Ontario Building Code, latest edition. This will include knowledge of LEED (leadership in Energy and Environmental Design), Energy efficient homes, and paybacks available for green building designs

## School of Science & Engineering Technology (SET)

Level	Program	Course Code	Course Title	Course Description
Diploma	Architectural Technician	ATCM 1133	Construction Material And Processes I	Students examine and study the common construction materials, site variables and construction processes relating to house construction as influenced by environment and energy efficiency standards. The course provides a basic knowledge of the terminology, the physical and chemical properties of materials, their manufacturing and fabrication processes, embodied energy, typical installation methods, efficiency of utilization and organization in a construction, repurposing or renovation project. Also, the materials and products are evaluated in relation to their appropriateness as affected by their durability, performance, sustainability and energy conservation. Metals, wood, concrete, masonry and plastics, thermal insulations, insulating concrete forms, doors, windows are among the materials reviewed. Students are introduced to Energy Star system, R2000 and LEED for Home standards and study basic issues of sustainable construction.
Diploma	Architectural Technician	ATBS 2134	Building Services And Environmental Systems	This course addresses the design overview of various building systems for houses and larger buildings including heating, ventilation, air conditioning, plumbing, water, waste, fire control, security and electrical systems. The focus of the course is to provide a fundamental understanding of the components that are important to functionality, safety, and human comfort. Public safety issues are discussed.
Diploma	Architectural Technician	BUILD 1000	Building As A System And Building Science	This course stresses the evaluation of the house/building as system using principles, such as, the basic concepts of building science and thermodynamics. Students examine the various factors which affect the energy inputs and losses to the system. Basic concepts of temperature, types of heat, heat capacity, expansion of solids and gases and heat transfer are studied. A comparison of the components of the system is required to determine how air, water and water vapor leakage and building movements contribute to maintaining a healthy indoor environment. This course studies all the aspects of a building as a system in order that the students can appreciate the relative significance of each component. Students also learn how the entire system/structure interacts to produce the overall effect/impact and, in doing so, are exposed to the fundamental science involved constructing buildings for Canadian climatic conditions including durability, energy use efficiency, healthy living conditions and to some basic concepts of sustainable design. The students study the fundamentals of energy loads on the building. The students are introduced to the concepts of embodied energy of building components. Associated policies such as R2000, LEED, BOMA BEST and EnergyStar will be introduced and developed in greater detail in subsequent courses.
Diploma	Architectural Technology	ATPR 5132	Preservation, Rehabilitation And Restoration Of Heritage Buildings	Students will study fundamental aspects of building restoration. A few historic buildings in the area will be selected for study relative to potential restoration and renovation. The Guidelines for National Historic Buildings and Sites, the Ontario Heritage Act, and the Ontario Building Code will be examined relative to building restoration and renovation. This course will be taught in one two hour block each week.

Diploma	Energy Systems Engineering Technology	ELEC 2012	Electricity II For Energy Management	This course builds on the concepts developed in Electricity I by examining the more principles of AC circuits, power factor, transformers, three phase power generation, and the basics of the electrical distributions grid in Ontario. Inverters are also being studied. Students will be alerted to issues relating to connecting renewable energy sources to the local grid and will receive a brief introduction about smart grid improvements in the future.
Diploma	Energy Systems Engineering Technology	EMEA 4000	Energy Audit And Management In Large Buildings	This course builds on ENER 1010 with the study of the procedures and techniques of energy assessments of larger existing buildings. The building envelope, components and energy utilization of all systems, equipment and appliances will be evaluated. Student will relate supply- side energy management parameters with demand side practices. The importance of collection, interpretation and presentation and communication of data to the client will be emphasized. Additionally, this course will study the practice of retrofitting or recommissioning of a building. The RCx investigation phase will provide a very similar analysis to an audit, with the added bonus (following NRCan or BOMA methodology) of focusing on operational, low-cost opportunities first (some conventional energy auditing tends to be focused on equipment retrofits). The course will clarify the distinction between these two activities. The concepts of energy benchmarking, tracking and analysis, and Energy Information System (EIS) tools will be introduced.
Diploma	Environmental Technology	WAST 3131	Industrial Waste	Students study the key aspects of industrial waste management and pollution prevention programs. Topics include the definition of industrial waste; the sources and types and classification of industrial waste (Reg 347); the regulatory requirements for industrial and hazardous treatment and handling; waste minimization practices and a comprehensive coverage of the primary waste treatment and emission control technologies. Applicable regulations relating to waste management are studied along with the introduction of the Waste Diversion Act.
Diploma	Energy systems engineering technology	EMMS 1000	Energy Regulations, Policies & Issues	This course examines the basic applications of conventional energy systems i.e. combustion and fuels, gas, oil and electric heating, ventilation, air conditioning and lighting in homes and small scale industrial and commercial buildings. Air to air heat pumps and radiant heating will be discussed. The basic principles of refrigeration, refrigerants and management of refrigeration systems, heating and cooling loads and load calculations are studied. The course deals with strategies and equipment in the aforementioned systems using blueprints and layouts so that these features will be easily recognizable to the graduates the field.
Diploma	Energy systems engineering technology	EMMS 2020	Energy Regulations, Policies & Issues	This course provides a thorough review of the content, context and impact of federal and provincial energy legislation and regulations. The significant impact that climate change has on policy development will be studied through an examination of the Green Energy Act, Ontario Energy Board Act, the Electricity Act, the Energy Efficiency Act and the Building Code. Specific applications related to energy auditing will be emphasized. Current federal and provincial energy policies and incentive programs will be examined and strategies to keep current with these programs will be explored.

Diploma	Energy systems engineering technology	EMDC 5010	<b>Design Concepts For Sustainable Building II</b>	This course builds on Design Concepts 1 and involves further integration of ideas and sustainable components into more complex structures and systems. Net zero energy consumption and low energy building concepts will be introduced in this course. Like other courses in this program, course content will evolve as new systems are developed. Fundamental principles studied in thermodynamics, solar thermal energy and building components along with factors such as building orientation and design will be studied relative to their applications in green building systems. Topics will include selected renewable energy systems, high performance building envelope, localized thermal mass and radiant wall panels. Rating systems, such as, LEED EB and BOMA Go Green and their applications will be studied for green buildings.
Diploma	Energy systems engineering technology	EMTO 3040	<b>Sustainable Development Policies &amp; Issues</b>	The students will study the planning process in Ontario. The Ontario Municipal Act, the Planning Act, the Green Belt Act and the Places to Grow policies and other related issues will be examined. The roles of the Regional (County) and local governments in the development of official plans will be discussed. Developing concepts of issues such as walkability, sustainable transit, cycling, built form and impact will be discussed. Possible new policies such as combined heat and power (CHP) in sustainable communities to provide decentralized electrical energy generation with the efficient use of waste heat to provide community heat and hot water. The concept of energy hierarchy will be introduced to emphasize efficient use of energy in communities and industry. Issues relating to waste management plans, safety plans and personal safety around demolition and construction sites will be studied. Evolving concepts of green energy, drop-in biofuels and biomass will be discussed.
Diploma	Energy systems engineering technology	EMIP 4010	<b>Energy Management For Industrial Processes</b>	This course builds on EMEA 4000, Energy Audits in larger buildings, with emphasis on the performance of processing and manufacturing equipment within a plant from an energy use efficiency perspective relative to industry best practice. The comparison between measured performance and industry best practice determines the potential for energy savings. Students will experience how statistics obtained from energy use observations can assist managers in improving energy efficiency, setting energy priorities and monitoring progress. Energy management systems such as ISO 50001 will be studied.
Diploma	Energy systems engineering technology	EMEM 5000	<b>Energy Mgmt Project I</b>	The students will work in small teams, as part of field placement, and produce a detailed energy evaluation on existing industrial, commercial or institutional building stock. The project can be as (1) a recommissioning project leading to a possible LEED application or BOMA certification by the owner, (2) as a study for possible retrofits to the building and ideas for inclusion and integration of renewable energy and enhanced energy efficiency into the energy management system or (3) an energy evaluation of an industrial processing or manufacturing production line. Working with a mentor, students will design, plan and justify their proposal for changes to the existing building/process and system. As another project option, the student team could work with the mentor in the development of a new green, sustainable building project. Interim deadlines will be set for completion of the various stages and meeting the target deadlines will be a meaningful component in the evaluation.
Diploma	Energy systems engineering technology	EMEM 6000	<b>Energy Management Project II</b>	Students will continue to work with a mentor and team from Energy Management Project I. The team will use the developed scoping and procedural plan to collect, summarize and analyze data. Students will complete a final report including simulation results on the proposed energy management modifications, on a new development or on a process. Reports will be presented to the owners and the reports will be evaluated by faculty with input from the owners or managers of the project site.

Diploma	Environmental Technology	ENVI 2131	<b>Environmental Science</b>	This one semester course (two hours lecture, two hours lab) introduces the fundamental principles of ecology and environmental science. It emphasizes an ecosystem approach to studying the environment. The interactions between abiotic and biotic are examined to gain an understanding of how a dynamic balance is achieved in natural ecosystems. This course also examines the effect of human intervention on ecosystems and biomes through an investigation of the five categories of pollution as well as the major trends in resource consumption and use. This is done to gain a better understanding of how the environment is altered by human action and why these actions may have significant effects on an ecosystem and its sustainability. The laboratory exercises are an integral part of this course. They are designed to both reinforce concepts developed during lectures as well as introduce new concepts. An emphasis is placed on terrestrial and aquatic ecosystems both through field and in class lab work.
Diploma	Environmental Technology	ENVI 3131	<b>Community and Environment</b>	This semester three course (3 hours lecture) will relate the technical aspects of environmental impacts to the response from the various interest groups within the Canadian community. It examines the diverse needs and activities of modern communities and their resulting impacts on the environment. Specifically, the course will examine the role of the various sectors affecting environmental outcomes including proponents, government, public interest groups and the media. The course also studies methods of conducting successful environmental programs to meet the demands of these dynamic communities.
Diploma	Environmental Technology	QUAL 1132	<b>Environmental Sampling</b>	This is a combined theory and lab/field course which provides instruction on environmental sampling and analysis, and associated environmental quality assurance, quality control practices utilized in industry and government. The theory component of the course is designed to develop an overall understanding of the natural environment (e.g., stream erosion and deposition, soil types, texture and classes, groundwater porosity and permeability, etc.) which is the integral component of understanding how various contaminants interact within varying environmental conditions. The laboratory/field work component of the course is designed to build on the theoretical knowledge delivered and provide the students with practical experience in utilizing various established monitoring and sampling protocols for different media and writing technical reports to develop the skills required to convey the technical information and derive recommendations and conclusions that are applicable to the various site conditions. The link with more advanced hydrogeology and hydrology is made both in the lectures and in the environmental chemistry and environmental engineering courses taken in future semesters in the program.
Diploma	Environmental Technology	ENEC 2131	<b>Ecology</b>	This one semester course (two hours lecture, two hours lab) builds on the principles of ecology that were introduced in the Environmental Science course. This course will focus on all of the aspects that influence ecosystems. To best demonstrate these influences, students will spend a great deal of their lab time focusing on one particular site and will work towards creating a comprehensive bioinventory of the site. The bioinventory will allow the students to work on their ability to identify trees, shrubs, wildflowers, grasses, birds, soils, etc. and understand how they all work together to create a very dynamic site.

Diploma	Environmental Technology	CHEM 3132	Environmental Chemistry	This course focuses on the chemical aspects of environmental problems that have been created by humans. Environmental chemistry of soil, water and air is studied by focusing on the two major chemical categories, namely organic and inorganic chemicals. Chemical and physical properties of various organic and inorganic compounds (e.g., VOCs, PAHs, PCBs, Mercury, Arsenic, Lead, etc.) will be reviewed in order to obtain a thorough understanding of how each of these compounds will interact within varying environmental conditions (e.g., surface and subsurface soil and water and air). Once an understanding of the chemical and physical properties of these compounds has been achieved, this knowledge will then be applied to the development of site specific sampling plan development and the selection of applicable site restoration approaches to remediate the various contaminants of concern.
Diploma	Environmental Technology	MICR 2132	Applied Environmental Microbiology	A one semester course designed to introduce the student to the theory and application of environmental microbiology. The lecture and labs will introduce the concepts of ecosystems (aquatic, terrestrial and atmospheric) at the microbial level and demonstrate how they impact on higher life forms and systems. The study of aquatic systems includes the description and significance of waterborne pathogens and indicator organisms. Also included is the microbiological analysis and evaluation of water samples. Practical applications extrapolate this information to water and wastewater treatment and testing. The study of terrestrial environments includes biogeochemical cycles and energy flow within the ecosystem and the microorganisms' involvement. This information is applied to bioremediation and site reclamation. The concepts of biotechnology and its uses in assessment and clean-up of environmental problems are introduced. Aero-microbiology and its significance are also included in the course. Practical lab exercises reinforce the theoretical principles of the lecture and provide the student with methodologies used by environmental laboratories to comply with current standards and practices.
Diploma	Environmental Technology	ENVI 3132	Topics In Environmental Science	This is a combined theory and lab course which provides instruction on environmental site assessments and site remediation; environmental audits (e.g., waste, compliance); spill prevention, contingency planning and emergency response; and the use of air dispersion models to predict the impact of changing policy on air quality. The lab component of the course includes both outdoor field and indoor lab activities. The emphasis in the outdoor field lab will be in conducting fieldwork (e.g., stream sampling, groundwater sampling) independently following standard protocols. The indoor lab activities provide an opportunity to analyze water samples collected in the field, conduct mock emergency scenarios, and apply methods for calculating air emission rates for air dispersion modeling.
Diploma	Environmental Technology	TOXI 1131	Environmental Toxicology	This course serves as an introduction to the principles and basic concepts of environmental toxicology. Toxicology is the study of the harmful effects of chemicals on living organisms. Dose-response relationships will be studied for various common chemicals and several parameters will be defined which can serve as indicators of the toxicity of a compound. An overview of the effects of toxic compounds on the human body will be given, along with specific examples and case studies. The effects of toxic agents on other living organisms in the aquatic and terrestrial ecosystems will also be addressed. Current issues such as trihalomethanes and endocrine disrupting compounds in drinking water will be discussed.

Diploma	Environmental Technology	ETEP 5131	Environmental Project Management	This course serves as an introduction to the principles and basic concepts of Environmental Project Management. Topics covered include: Development of Project Teams, Project Procurement, Project Budgeting and Timelines, Project Communications, and Project Risk Management. Throughout the course, students will further develop their computer software skills in assignments that require the use of MS Word, MS Excel and MS Project.
Diploma	Environmental Technology	REGS 2131	Environmental Enforcement	Students study, in detail, environmental enforcement in Ontario. Abatement procedures, abatement tools and management strategies, including ISO 14000, are examined. Spill clean-up and legal defenses for environmental charges are examined from an industry perspective. Also, common law and its expanding role in environmental protection are examined with case studies to demonstrate the common law implications in environmental situations. Trends in environmental policy are studied so that students can be more aware of probable directions in future environmental enforcement activities. Important government and private sector websites are explored so that graduates can remain current throughout their careers and participate in life-long learning.
Diploma	Environmental Technology	ENGR 1131	Environmental Engineering	This lab and lecture course is intended to expand the knowledge of environmental technology students to engineering subjects. This course covers topics in water and wastewater treatment, hydraulics, storm water management, energy, and noise pollution. Integral to this course is the application of mathematical concepts learned earlier in the program.
Diploma	Environmental Technology (Fast – track)	REGS 1131	Environmental Regulations	This course provides a thorough review of environmental protection legislation and regulations at the federal, provincial and municipal levels. It also covers public attitudes and a brief history of key environmental issues and incidents that helped shape current environmental legislation. The Canadian Environmental Protection Act, the Canadian Environmental Assessment Act, the Fisheries Act, the Ontario Environmental Assessment Act, the Nutrient Management Act, the Ontario Water Resources Act, the Environmental Bill of Rights, the Safe Drinking Water Act, the Green Energy Act and the Water Opportunities Act, among others, are introduced along with some of the key regulations. The important regulations are examined in greater depth in subsequent courses. The Occupational Health and Safety Act is introduced particularly as it relates to the Ontario environmental employers and employees.
Diploma	Environmental Technology	PLAN 3131	Urban Environmental Planning	This semester six course (3 hours lecture) provides instruction on environmental planning. The key study areas will include: the basic philosophy of planning; the current and forthcoming guidelines in planning, particularly regarding the environment; techniques to assess the environment for planning purposes; and specific design considerations to ensure environmental sustainability.

Diploma	Horticulture – Food and Farming	AGFA 1131	Fruits For Artisan And Urban Agriculture	This course will provide the student with a broad knowledge of fruit production while using a major project to build on specific interests throughout the term. New urban and ethnic markets have created demand for new fruit types and varieties. The course will explore what markets have thrived in the past, what have failed, and what the future may hold. The student will come away with an appreciation of how basic nutrition, water & soil conditions, and localized microclimates impact fruit production in Ontario. Mainstream and organic production practices are covered in parallel as topics are developed. The two hour lab is spent in the greenhouse, lab, field or as extra lecture time as appropriate from week to week. Fruits covered include, but not be limited to, apples, cherries, strawberries, currants, raspberries, grapes and high bush blueberries.
Diploma	Horticulture – Technician	HTGS 4131	Greenhouse Structure, Controls And Energy Management	The basic concepts of energy efficient greenhouses will be studied along with programmable control systems regulating temperature, humidity, carbon dioxide, irrigation, fertilization and other variables. Various energy systems will be examined including biomass, cogeneration greenhouses and traditional natural gas systems. This course will be presented with two 2-hour blocks so that faculty can use the lecture room, greenhouse, field or laboratory as appropriate from week to week. Further experience will be gained in managing plant production in greenhouses.
Diploma	Mechanical Engineering Technician	METL 2131	Materials And The Environment	This course continues the study of engineering materials and their properties. The knowledge of material structure and theories of deformation developed in the course METL 1131 is applied to the discussion of the high temperature behavior of the materials. Topics of the course include thermal, creep, electrical, magnetic, and optical properties of engineering materials. Various aspects of corrosion and oxidation mechanisms as well as ways of protection are considered. In the second part of the course students will research various aspects of interrelationship between materials and environment, learn the eco-audit tools and sustainable development concepts.

Diploma	Horticulture – Food and Farming	AGFA 2131	Food And Agriculture Regulations And Policies	This course provides a review of the content, context and impact of federal, provincial and municipal legislation and regulations. The Canadian Food Inspection Agency regulations, The Ontario Environmental Protection Act, the Nutrient Management Act, the Pesticides Act, land use planning, the Green Belt Act and their key regulations are covered. Environmental Farm Plan requirements will be studied. Specific applications related to agriculture production, food processing and wastes are emphasized. Organic certification is covered. Current federal and provincial incentive programs for small business will be examined and strategies to keep current with these programs are explored.
Diploma	Horticulture – Food and Farming	AGFB 1131	Fundamentals Of Botany, Plant Pathology & Entomology	The fundamentals of botany relating to selected horticultural plants in horticulture and urban agriculture are taught in conjunction with plant pathology and entomology. Topics include the most common plant diseases in horticulture in the region with emphasis on identification, nomenclature, life cycles, damage recognition and basic evaluation, and management of the diseases. Also, the common insect pests in the region are covered with emphasis on identification, nomenclature, life cycles, damage recognition and management of the insects.
Diploma	Horticulture – Food and Farming	AGPV 1131	Propagation Of Vegetables For Field And Urban Agriculture	This course introduces the principles of the propagation of major horticulture field crops in the region. Basic coverage of vegetable crops including, but not limited to, legume, cole, root, tuber, leaf, stem perennial crops, summer and winter squash, peppers, sweet corn and tomatoes are presented. Production of selected herbs is introduced. Specialty crops of increasing importance particularly in ethnic markets are explored. Species that are particularly appropriate for community, home and balcony gardens are studied, also. Basic nutrition, water and growing condition requirements are addressed. Mainstream and organic production practices are covered in parallel as topics are developed. This course involves the lecture room, greenhouse, field or laboratory as appropriate from week to week. Harvesting and storage aspects of the production of vegetables are covered in a subsequent course.
Diploma	Horticulture – Food and Farming	AGPD 2131	Farm Planning & Design	This course introduces the student to the methodologies of farm planning and design. Topics span the planning and decision-making necessary from pre-planting to market as they relate to the fundamentals of length of growing season, soil-plant relationships, farm microclimates, the layout of buildings, allocation of site uses, crop planning, species selection and both short-term and long-term farm visioning. The design of a farm will be understood as a process that is very important to the sustainability of any farm venture, economically and environmentally.
Diploma	Horticulture – Food and Farming	AGTA 1131	Topics In Field & Urban Agriculture	Topics of timely interest within value-added agriculture are presented in modules and will include, but not be limited to, natural toxins in foods, brief basic introduction to organic agriculture (expanded upon in other courses), traceability in foods, quality management, human resource management, risk management and safety plans. The topics covered have direct or indirect implications to other courses and are presented here so that the fundamentals of these concepts can be enhanced in various ways as applicable.
Diploma	Horticulture – Food and Farming	HTIS 2131	Introduction To Soils, Agriculture And Horticulture	Students study about geology, soil formation and the physical, chemical and biological properties of soils in central Ontario where horticulture crops are common. Soil management, minimizing erosion and the fundamentals of plant nutrition and fertilization of crops will be presented. Fundamental environmental impacts of various management systems will be examined. Students are introduced to the agricultural industry and the horticulture sector of that industry. A brief history of the development of agriculture and agricultural organizations and agencies is presented.

Diploma	Horticulture – Food and Farming	HTGP 2131	Greenhouse Production And Indoor Plants	This course will focus on the production of vegetables such as tomatoes, cucumbers and peppers as well as some herbs, edible flowers, ornamentals and designated tropicals specific to controlled environment applications. The production of locally grown species of flowers and seedlings will be introduced. Soils/container growth media and fertilizers will be studied relative to their impact on plant growth and yield. Visits to area commercial greenhouses will enhance the student learning experiences. Also, students will study the specific needs of growing indoor plants for homes, offices or solariums.
Diploma	Horticulture – Food and Farming	HTGS 4131	Greenhouse Structure, Controls And Energy Management	The basic concepts of energy efficient greenhouses will be studied along with programmable control systems regulating temperature, humidity, carbon dioxide, irrigation, fertilization and other variables. Various energy systems will be examined including biomass, cogeneration greenhouses and traditional natural gas systems. This course will be presented with two 2-hour blocks so that faculty can use the lecture room, greenhouse, field or laboratory as appropriate from week to week. Further experience will be gained in managing plant production in greenhouses.
Diploma	Horticulture – Technician	HTAH 3131	Annual & Herbaceous Perennials For Historical & Contemporary Gardens	Students will study the key identification characteristics, propagation, planting and growth of a wide variety of annual, perennial and biennial plants. Students will learn to recognize plants by studying flowers, flowering traits, and time of flowering. Plants favoured by birds, bees and/or butterflies will be noted. Local cooperators and projects will be sought for the benefit of students and community. Students may be involved in the studying, planning and maintenance of historical plants and gardens.
Diploma	Horticulture – Technician	HTEO 2131	Equipment Operation, Maintenance And Safety	This course provides the opportunity for students to study and show competency in the set up, operation, basic maintenance and safety relating to some of the equipment involved in the horticultural industry. Experience will be gained on a broad range of tools and equipment from manual trimmers to a skid steer loader. Students learn about the principles and terminology of electrical, hydraulic, power and lubrication systems. Safety issues relating to the operation of the equipment will be stressed. Students will learn WHIMIS, first aid, industry, and occupational health and safety practices and standards and how they are applied in various work environments. Safety is paramount in this Horticulture Technician Program and will be a component of many other courses.
Diploma	Horticulture – Technician	HTHP 1131	Horticulture Principles And Sustainable Practices	This course introduces basic botany as it applies to horticulture species and initiates study of the propagation of major horticulture field crops in the region. Basic coverage of crops such as tomatoes, cabbage, cauliflower, pumpkins, squash, berries, apples and adapted ethnic vegetables and fruits are presented. Species that are particularly appropriate for community, home and balcony gardens will be discussed. Plant identification, native species, invasive species, and low maintenance species are discussed. Basic nutrition, water and growing condition requirements will be addressed. Mainstream and organic production practices will be covered in parallel as topics are developed. An awareness of potential environmental impacts is fostered.
Diploma	Horticulture – Technician	HTLD 1131	Landscape Planning; Materials & Construction I	This course introduces the fundamental characteristics and use of many of the materials such as wood, concrete, concrete products, aggregates, stone, and geo textiles used in basic landscape construction projects as well as plant materials as they relate to softscaping projects. Students will demonstrate skills relating to hard and soft landscaping to produce a final project. Low maintenance species, non- invasive, drought tolerant, eco-friendly and natural garden concepts are covered. The documenting and reporting of costs of each component of the design will be stressed and the basics of project staging for time and cost effectiveness are introduced.

Diploma	Horticulture – Technician	HTCP 4131	Topics In Horticulture	Topics of timely interest within Horticulture are presented in modules and will include, but not be limited to, project management, quality management, human resource management, risk management and safety plans. The topics covered have direct or indirect implications to other courses and are presented here so that the fundamentals of these concepts can be enhanced in various ways as applicable. This course provides the basic concepts for students to plan, organize, and manage resources to enable the successful completion of a specific project incorporating health and safety standards. Bringing a project in on schedule, on budget and up to design standards are key components of the course. In the competitive landscape sector, the quality of products and services need to match customer expectations. Students will have the opportunity to expand their understanding
Diploma	Horticulture – Technician	HTIS 2131	Introduction To Soils, Agriculture And Horticulture	Students study about geology, soil formation and the physical, chemical and biological properties of soils in central Ontario where horticulture crops are common. Soil management, minimizing erosion and the fundamentals of plant nutrition and fertilization of crops will be presented. Fundamental environmental impacts of various management systems will be examined. Students are introduced to the agricultural industry and the horticulture sector of that industry. A brief history of the development of agriculture and agricultural organizations and agencies is presented.
Diploma	Horticulture – Technician	HTSG 1131	Sustainable Garden Concepts And Design	This course will introduce the philosophy of design, the basic design principles and practical skills necessary for the development and deployment of a landscape plan. Students will be exposed to reading and following an existing draft plan or blue print including scale and reading elevations variations. Subsequently students will develop plans. The phasing of each plan development will begin with the assessment or evaluation of the site for its key natural characteristics and then the progressive evolution of a landscape plan. This course will be project oriented and involve case studies as well as skills development such as basic drafting. The laboratory component will augment the lectures and allow students to enhance basic drafting and graphic skills.
Diploma	Horticulture – Technician	HTWD 1131	Woody Deciduous & Evergreen Species	Plant identification and knowledge are fundamental skills in the landscape and horticultural industries. This course involves the study of approx. 100-120 woody deciduous and evergreen plants hardy to at least USDA zone 5 including identification, landscape characteristics, growing conditions, typical use, common pests and diseases and other potential problems. Students will learn the proper nomenclature for all of the plants studied in the course. Plants will be studied in the classroom, on the grounds at Parkwood and on field trips when possible.
Diploma	Horticulture – Technician	HTEP 3131	Entomology & Plant Pathology	Topics include the common insect pests in horticulture, landscaping, greenhouse and selected fruits and vegetables in the region with emphasis on identification, nomenclature, life cycles, damage recognition and basic evaluation, and management of the insects. Common plant diseases in horticulture in the region receive equal emphasis again focusing on identification, nomenclature, life cycles, damage recognition and basic evaluation, and management of the diseases. Integrated pest management will be introduced with brief discussion on cultural practices, biological control methods and chemical control options. Importance of bees for honey production and pollination will be discussed.

Diploma	Horticulture – Technician	HTLA 3131	Historical And Contemporary Landscape And Garden Maint.	Students will evaluate existing landscape installations relative to structural soundness and aesthetic value. Recommendations will be made for maintenance and repair of hard landscape features to enhance the sustainability. When appropriate, new trees, shrubs, bulbs and flowers will be planted in order to renovate the landscape. Sustainable low maintenance species and systems will be discussed in greater detail than in previous courses. Where possible, projects within the community will be selected for rejuvenation so that there is a benefit to the community and to the experience of the students. Mainstream and organic production practices will be covered in parallel as topics are developed. Whenever practical, students will be involved in maintaining, sustaining and enhancing of the Parkwood National Historic Site and Gardens.
Diploma	Horticulture – Technician	HTLD 3131	Landscape Planning, M&C II	This course builds on Landscape Planning, Materials and Construction I. Students will have the opportunity to plan more sophisticated and complex combinations of materials and plants. Small water gardens, green roof applications, living walls, actual wall construction are developed. Sustainable, eco- friendly concepts are stressed. Students will be introduced to various spreadsheet and computer applications commonly used in horticulture and select landscape software.
Diploma	Horticulture – Technician	HTPT 3131	Parks & Turf Management	Municipal parks are prominent components of communities and most receive heavy use. Students will study the management and maintenance of these parks, turf, playing fields, gardens and botanical gardens. Watering regimes and irrigation systems will be studied. Soil preparation, turf grass seeding, fertilization, irrigation, mowing and harvesting will be studied as performed on turf production farms. Turf grass seeding and laying of sod on lawns in addition to other maintenance procedures will be examined and performed. Lawn care business practices will be studied in light of the banning of pesticides for aesthetic purposes. The importance of public relations will be discussed.
Diploma	Horticulture – Technician	HTAR 3131	Arboriculture	Tree growth and structure will be discussed relative to site selection, species selection, placement, planting or transplanting subsequent care and management. The significance of trees in the environment will be stressed. Tree handling equipment and tree maintenance will be studied. Safety will be a focus of this course and students will study industry standards for arborists.
Diploma	Horticulture – Technician	HTGP 2131	Greenhouse Production And Indoor Plants	This course will focus on the production of vegetables such as tomatoes, cucumbers and peppers as well as some herbs, edible flowers, ornamentals and designated tropicals specific to controlled environment applications. The production of locally grown species of flowers and seedlings will be introduced. Soils/container growth media and fertilizers will be studied relative to their impact on plant growth and yield. Visits to area commercial greenhouses will enhance the student learning experiences. Also, students will study the specific needs of growing indoor plants for homes, offices or solariums.

Diploma	Water Quality Technician	HLTH 1133	Health And Safety	<p>This two-hour lecture course provides specific health and safety training in areas that are directly pertinent to water and wastewater facilities and field operations in water distribution and collection systems. The course covers basic health and safety legislation and focuses on roles, responsibilities, personal protection and worker rights that are immediately applicable to an industrial workplace.</p> <p>Specific instruction is conducted in key areas that are most relevant to the water and wastewater industry, such as confined spaces, traffic control and tag out/lock out.</p>
Diploma	Water Quality Technician	MICR 1135	Water Microbiology I	<p>This course will provide an introduction to the microbial world of Microbiology. It will be a broad based course which will cover a practical and theoretical introduction to the main characteristics of prokaryotic and eukaryotic microorganisms which are important from process microbiology and public health viewpoints. It will introduce cell morphology including structure and function. Bacterial, fungal, protozoan, algal, and viral organisms will be studied as to their growth, reproduction and enumeration as well as the physical and chemical agents used in the disinfection of water. The laboratory portion will provide hands on practical experience in aseptic technique and the isolation, cultivation and enumeration of microorganisms found in water and wastewater, as well as preparing their growth medium.</p>
Diploma	Water Quality Technician	REGS 1133	Regulations And Enforcement	<p>This course examines the regulations and enforcement of water and waste water treatment in both the municipal and industrial sectors. The course will concentrate on the Safe Drinking Water Act (SDWA) and the Ontario Water Resources Act (OWRA). Detailed examination of several key regulations, such as Reg 128/04 and Reg 170/03 under the SDWA and Reg 129/04 under the OWRA, will be conducted. Less detailed study of other regulations will also be conducted. Also, several other Acts will be reviewed such as the Canadian Environmental Protection Act (CEPA) with particular reference to the National Pollutant Release Inventory, the Ontario Environmental Protection Act with particular attention to the regulations relating to the Municipal &amp; Industrial Strategy for Abatement (MISA Regs), the Sustainable Water and Sewerage Systems Act, Water Opportunities Act, Watershed-based source protection and the Clean Water Act. A sewer bylaw will be examined. The use of inspections, investigations and various control documents will be studied.</p>
Diploma	Water Quality Technician	WATR 1133	Intro To Water And Waste Water	<p>This course is a three hour lecture and two hour lab per week and is designed to give students an understanding of water and its use by residential and ICI sectors of society. The properties of water (physical, chemical and microbiological) will be examined and used for the basis of the study of treatment. The properties of wastewater will also be examined and used for the basis of the study of wastewater treatment. Although treatment of water and wastewater is important, an equally important aspect is the movement of water and wastewater, to and from consumers. This course will introduce students to the concepts involved in the distribution and collection of water and wastewater. The lab component of this course will focus on presenting numerous water and wastewater testing methods used in all aspects of the water and wastewater industry. The lab component will also be used to provide students the opportunity to visit operating facilities and gain hands on exposure.</p>

Diploma	Water Quality Technician	WATR 4133	Waste Water Collection & Treatment	This course consists of two hours lecture and two hours lab per week. The collection and treatment of wastewater is an important component in protecting the natural environment and receiving waters in Ontario. The course begins with an in-depth examination of wastewater collection and then examines in detail the various wastewater treatment methods currently in use throughout Ontario. The major trends in wastewater management at the industrial, urban and agribusiness levels are also covered. This course has an emphasis on operator preparedness for employment in the wastewater treatment sector.
Diploma	Water Quality Technician	WATR 6133	Water Treatment & Distribution	This course consists of two hours of lecture and two hours of lab per week. It is a detailed examination of water treatment and water distribution. This course investigates the sources and characteristics of drinking water and how that water is treated to make it safe to drink. This course also investigates the design, constructions, and operation of water distribution systems. Throughout this course, the topics are related back to the context of the roles and responsibilities of being a water treatment and/or water distribution operator within the Province of Ontario. As topics are discussed, there will also be reference to pertinent legislation (within the jurisdiction of the Province of Ontario). This course allows students an opportunity to select an industrial application or alternative treatment that is of interest to them and research the topic for later presentation to the class
Diploma	Architectural Technology	EMDC 3000	Design Concepts For Sustainable Building 1	Design and construction of sustainable buildings are introduced in this course with particular reference to energy use efficiency and energy conservation. Materials selection, components, internal services, air quality and economic factors relative to construction and future energy use will be discussed. The commissioning of buildings under LEED, BOMA Best or other evaluation systems will be covered in some detail and the course will stress that the commissioning or approval under these systems should include all credit points, to ensure the goals are met. The course will examine the integrated design process noting the roles of architects, civil, mechanical and electrical engineers, consultants, owners and municipalities. Met. The course will examine the integrated design process noting the roles of architects, civil, mechanical and electrical engineers, consultants, owners and municipalities.
Diploma	Energy systems engineering technology	EMGE 3030	Geothermal And Clean Energy Alternatives	This course introduces the basic design, principles of installation and operation of geothermal systems. The theory behind various geo- exchange systems and their applications are studied. Students discuss the materials, components and fluids of different geothermal heat exchanger installations. The student is exposed to the geological criteria considered as it pertains to geo- exchange applications and installations. Students will observe the operation and control of the geothermal systems at both the Whitby and Oshawa campuses (the Oshawa campus installation is the largest in Canada ? 300 wells 300 metres deep). The basic theory of harvesting energy from wind will be introduced. Through the combination of theoretical and practical studies, students will identify and compare the operating principles of different commercially available wind turbine designs. The fundamental theory of nuclear energy for generation on electricity is studied. Students will tour the combined heat and power plant on the Oshawa Campus and studied the basic principles of CHP. Other clean energy alternatives including biomass gasifiers will be studied.

Diploma	Energy systems engineering technology	EMEP 3010	Energy Performance Sim	This course briefly refreshes the knowledge of students of diverse backgrounds with basic computer operations and expands into computer applications for analyzing the energy performance of buildings. Software such as HOT2000, RETScreen and other building energy performance simulation programs will be examined. This course also will examine design tools, such as CANQUEST, (successor to NRCan's EE4), which forms the basis for the Design Validation program as well as LEED energy scoring. As new energy performance software comes available it will be added to the curriculum to replace outgoing programs.
Diploma	Energy systems engineering technology	EMPS 2040	Solar Thermal And Solar Pv	Solar thermal energy and solar PV systems are discussed for onsite roof or ground mounts as applicable. Students will study active and passive solar systems applied to residential, commercial and industrial sectors. Through the compilation of theoretical and practical thermodynamic and heat transfer studies, students will be able to identify, differentiate and evaluate solar thermal configurations. In this course, students will study the fundamentals of collecting energy from sunlight and converting it into electricity. The pros and cons of each type of system, importance of site factors and economic considerations will be discussed.
Diploma	Energy systems engineering technology	EMDC 3000	Design Concepts For Sustainable Building 1	Design and construction of sustainable buildings are introduced in this course with particular reference to energy use efficiency and energy conservation. Materials selection, components, internal services, air quality and economic factors relative to construction and future energy use will be discussed. The commissioning of buildings under LEED, BOMA Best or other evaluation systems will be covered in some detail and the course will stress that the commissioning or approval under these systems should include all credit points, to ensure the goals are met. The course will examine the integrated design process noting the roles of architects, civil, mechanical and electrical engineers, consultants, owners and municipalities.
Diploma	Energy systems engineering technology	EMEA 4000	Energy Audit And Management In Large Buildings	This course builds on ENER 1010 with the study of the procedures and techniques of energy assessments of larger existing buildings. The building envelope, components and energy utilization of all systems, equipment and appliances will be evaluated. Student will relate supply-side energy management parameters with demand side practices. The importance of collection, interpretation and presentation and communication of data to the client will be emphasized. Additionally, this course will study the practice of retrofitting or recommissioning of a building. The RCx investigation phase will provide a very similar analysis to an audit, with the added bonus (following NRCan or BOMA methodology) of focussing on operational, low-cost opportunities first (some conventional energy auditing tends to be focussed on equipment retrofits). The course will clarify the distinction between these two activities. The concepts of energy benchmarking, tracking and analysis, and Energy Information System (EIS) tools will be introduced.
Diploma	Water Quality Technician	WATR 4133	Water And Wastewater Engineering	This course consists of two hours of lecture and two hours of lab per week. The course provides a detailed examination of groundwater and surface water movement, availability and usage and the factors that impact and influence them. This course investigates how groundwater and surface water move, the impact of porosity and permeability, rainfall and drought. This course focuses on the importance of the entire watershed, the influence of the hydrological cycle, stream flow, floods, reservoirs and aquifers. This course also focuses on the mechanics that occurs when both installing a well and extracting water from it. Throughout the course, students will be encouraged to relate their learning back to their future roles as operators and to identify how this learning will provide them with a strong foundation for making sounds decisions.

Diploma	Architectural Technician	ATLU 3136	Land Use And Site Analysis And Planning	A brief basic introduction to the planning process in Ontario which specifies the roles of the provincial, regional and municipal governments as required by the Ontario Planning Act is presented. The role of zoning by-laws will be briefly examined as they affect residential, commercial, industrial and institutional developments. Basic concepts of traditional residential planning will be studied along with new concepts of community planning. Students will examine the principles of a functional site plan involving the many variables that can affect construction. The fundamentals of the methods and techniques of site analysis and planning with particular attention to natural systems and physiographic factors are presented. Soil characteristics, excavating, foundation construction and treatments, and site grading are also covered.
Diploma	Architectural Technology	ATDO 6131	Design Options Evaluation	Students will conduct targeted financial analyses of various architectural design options ranging from new construction to retrofitting or renovating an existing structure. Capital costs, operational costs, financing, time for capital payback, return on investment and other important financial considerations will be analyzed in a similar format that would be undertaken by a company pondering investments in construction options. Cost-benefit analyses will be done for green buildings and renewable energy options and in doing so, students apply business principles to design and building practices.
Diploma	Energy Systems Engineering Technology	EMMS 1000	Energy Regulations, Policies & Issues	This course examines the basic applications of conventional energy systems i.e. combustion and fuels, gas, oil and electric heating, ventilation, air conditioning and lighting in homes and small scale industrial and commercial buildings. Air to air heat pumps and radiant heating will be discussed. The basic principles of refrigeration, refrigerants and management of refrigeration systems, heating and cooling loads and load calculations are studied. The course deals with strategies and equipment in the aforementioned systems using blueprints and layouts so that these features will be easily recognizable to the graduates the field. This course will stress applications, configurations and controls as opposed to design and installation. This course will stress energy use by the systems, major appliances and equipment and suggest possible energy conservation measures.
Diploma	Biotechnology – Advanced	BIOT 4131	Bio – Regulations	Bio-Regulations (BIOT 4131) is a one-semester course with three scheduled hours of lecture per week. This course will provide students with an understanding of vital legislation, procedures and policies that exist to regulate workplaces in general and biotechnology-related workplaces in particular. Federal, Provincial and Municipal legislation and guidelines as they apply to biotechnology will be examined. Students will become familiar with Workplace Hazardous Materials Information System (WHMIS), Good Documentation Practices, Laboratory Biosafety, Good Manufacturing Practices (GM P), regulations of agricultural biotechnology in Canada, HACCP, Occupational Health and Safety in the workplace, regulations for labeling and manufacturing cosmetics, radiation safety, and ISO 9000 and 17025. Students will apply their understanding of these regulations to case studies.

Diploma	Horticulture – Food and Farming	AGFS 3131	Process Operations For Artisan I	This course is designed to discuss foods and the fundamentals of niche food processing and food safety. The course focuses on a broad range of food products and preservation principles but several examples are selected to examine products derived from plants and will include, but not be limited to fruit and vegetable beverages, jams, jellies and pickles. Subjects covered include: the functionality of major and minor food components, unit operations, deteriorative factors of food, heat & cold preservation and processing. This course is designed to discuss foods and the fundamentals of niche food processing and food safety. The course focuses on a broad range of food products and preservation principles but several examples are selected to examine products derived from plants and will include, but not be limited to fruit and vegetable beverages, jams, jellies and pickles. Subjects covered include: the functionality of major and minor food components, unit operations, deteriorative factors of food, heat & cold preservation and processing.
Diploma	Horticulture – Food and Farming	AGOH 3133	Harvest & Post Harvest Methods & Systems	This course introduces the student to the integrated concepts of harvest and post-harvest biology with the methods and technologies of harvesting and storage where applicable. Topics span the planning and decision-making necessary from pre-planting to market as they relate to harvest timing, desired harvest duration, harvest method and type of storage, if necessary, to further extend the market season. Consideration will be given to harvest methods and possible storage techniques for both modest sized operations up to larger more mechanized production systems. The harvest methods for both vegetables and fruits of traditional and emerging local popularity are studied in designated groups that have somewhat similar growth, harvest and possibly storage similarities. For example, groupings include but are not limited to tree fruits; root crops; brassicas; berries; melons, pumpkins and squash; sweet corn. Sanitation, standardization, food safety and quality are considered for various methodologies studied.
Diploma	Pharmaceutical and Food Science Technology	NUTR 2132	Food & Pharmaceutical Science	This is a three hour lecture course designed to introduce the student to pharmaceutical and food science technology. The Canadian pharmaceutical industry and how it's regulated is introduced. Students will examine basic pharmaceutical forms along with product quality control and assurance and product labeling requirements. Functional Foods and Natural Health Products are defined and the industry examined. Natural Health product regulations are introduced with labeling requirements. The Food industry is introduced along with its regulations and food product labeling requirements. Food Science and Technology is examined through the introduction of the major and minor components of food. Students will also be introduced to the functionality of these components in food processing and the management of product quality.

Diploma	Pharmaceutical and Food Science Technology	GOOD 1131	Food & Drug Laws & Regulations	Good Manufacturing Practices (GOOD 1131) is a three hour lecture course intended to introduce the student to Food and Pharmaceutical legislation. This course reviews current legislation - federal, provincial, and municipal - that regulates the food and pharmaceutical industries in Ontario and the agencies that enforce the legislation. The Food and Drugs Act, the pharmaceutical and food good manufacturing practices (GMPS) are discussed. WHMIS, HACCP, ISO 9000 and similar quality programs are discussed.
Diploma	Chemical Engineering Technology	INDC 6100	Industrial Chemical Processes	This course is the centerpiece of the Chemical Engineering Technology program bringing together all aspects of the industry. It requires students to use principles and skills from the previous two years in theory and laboratory applications. Process flow and variables, system analysis and process control are the key items studied in this course. Sustainability lecture is delivered by DC sustainability Coordinator
Diploma	Biotechnology – Advanced	BIOT6 131	Bio-Processing	Bio-Processing is a one-semester course with one scheduled hour of lecture and three scheduled hours of laboratory time per week. This project-based course will allow students in the final semester of the Biotechnology - Advanced program to put into practice the skills and knowledge that they have developed in their program, while working in a team environment. Each member of a student team will lead a written group project. In the laboratory, student teams will conduct two concurrent pilot bioprocessing processes. In one process teams will express and purify a functional enzyme from a microorganism using standard methods. In the other teams will carry out successive small-scale fermentations to convert a starting material into a product via an intermediate. Students will run assays to monitor both processes and to assess the quality and purity of the process intermediates and products. Students will be taught fundamental leadership skills; how to set up and maintain a laboratory notebook; how to write a research proposal and a business plan; and how to write a journal article, a formal laboratory report, and a certificate of analysis. Student will develop a plan for ongoing personal and professional development. Fermentation theory, sustainability, lab records, and fundamental business concepts will also be discussed in the lectures.