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**ABEN 100**
**Starting Your Own Business**
*3 credits, 45 hours*
An introduction to the Aboriginal Entrepreneurship program and the development of preliminary skills and knowledge including a self-assessment, research skills, sectoral studies, mentoring and an overview of Aboriginal business issues and the business plan.

**ABEN 103**
**Communications**
*4 credits, 60 hours*
Development of effective writing and reading skills with progression to oral and written communication including listening skills, presentations, giving and receiving feedback, business writing including letters, memos and reports.
*Prerequisite: ABEN 100 or consent of the Program Chair*

**ABEN 106**
**Marketing for New Business Ventures**
*3 credits, 45 hours*
An introduction to marketing for new and developing businesses including market research, sectoral studies and the development of a marketing plan.
*Prerequisite: ABEN 100 or consent of Program Chair*

**ABEN 109**
**Personal/Management Skills**
*3 credits, 45 hours*
Development of personal and interpersonal skills including goal setting, leadership and management skills, coaching and mentoring and a personal development plan.
*Prerequisite: ABEN 100 or consent of the Program Chair*

**ABEN 112**
**Finance for Aboriginal Business**
*3 credits, 45 hours*
Analysis of the funding challenges and opportunities for Aboriginal business. Introduction to numeracy skills applied to the topics of money management and budgeting.
*Prerequisite: ABEN 100 or consent of the Program Chair*

**ABEN 115**
**Small Business Accounting & Bookkeeping**
*5 credits, 75 hours*
Development of numeracy through an introduction to accounting and related standard software packages. Set up of a small business accounting system. Development of skills organizing and maintaining information and data.
*Prerequisite: ABEN 100 or consent of the Program Chair*

**ABEN 118**
**Business Law**
*3 credits, 45 hours*
Introduction to business law including legal forms of business, contracts and contractual obligations, liabilities, insurance and bonding and the legal issues related to Aboriginal business activity.
*Prerequisite: ABEN 100 or consent of the Program Chair*

**ABEN 121**
**Human Resource Issues**
*3 credits, 45 hours*
Recruiting, selecting and training staff, relationships with staff, team work, dealing with difficult people, dealing with family and band members.
*Prerequisite: ABEN 100 or consent of the Program Chair*

**ABEN 124**
**E-Commerce for Small Business**
*2 credits, 45 hours*
Introduction to e-commerce including websites, electronic tendering and internet research.
*Prerequisite: ABEN 100 or consent of the Program Chair*

**ABEN 127**
**The Business Plan**
*1 credit, 15 hours*
Finalize the business plan using standard software.
*Prerequisite: Completion of all other courses or consent of the Program Chair*

**ABST 020**
**Aboriginal Studies**
*5 credits, 5 hours lecture*
Aboriginal Studies 20 involves the study of the wealth and diverse nature of Aboriginal languages and cultures. Aboriginal Studies 20 explores concepts within the students' own unique context. It is intended to enhance understanding of the diverse Aboriginal cultures within our region, Canada and the world. The term "Aboriginal" refers to First Nations Métis and Inuit. It includes the study of policies, legislation, conflict and cultural change.
*Prerequisite: SOST 010*

**ABST 030**
**Aboriginal Studies**
*5 credits, 5 hours lecture*
Students will gain a greater understanding of the current issues facing Aboriginal people worldwide. Aboriginal Studies 30 enables students to demonstrate an understanding of the issues of Aboriginal rights and self-government, Aboriginal land claims, Aboriginal peoples in Canadian society and Aboriginal world issues.
*Prerequisite: ABST 020*

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**ACCT 311**
**Introductory Accounting**
*3 credits, 3 hours lecture*
This course is an introduction to financial accounting and reporting for Canadian businesses with an emphasis on providing information relevant to external users. The course focuses on the mechanics of double-entry bookkeeping and accrual accounting to enable students to prepare financial statements in accordance with generally accepted accounting principles.
*Prerequisites: ECON 101 and ECON 102*

**ACCT 322**
**Managerial Information and Control Systems**
*3 credits, 3 hours lecture*
This course examines the use of accounting information by people within organizations to plan and control operations. Various techniques for processing and interpreting information are introduced, emphasizing the development of information systems appropriate for specific decision needs. The impact of accounting information on the behaviour of various users within the organization is studied.
*Prerequisite: ACCT 311*

**ACSKL 110**
**Strategic Postsecondary Academic Skills**
*3 credits, 3 hours lecture*
This course is designed to increase students' chances for success in college. Topics include: higher education terminology, learning strategies and styles, setting college and career goals, adjusting to campus diversity, time management, stress management, active listening skills, building a positive student-teacher connection, effective group work skills, note-taking, test-taking and study strategies, student rights and responsibilities, and getting the most from Web CT, file management and security, as well as basic file transfer issues.

**ACSKL 120**
**Postsecondary Critical Writing, Reading and Research Skills**
*3 credits, 3 hours lecture*
This course is designed to increase students' chances for success in college. Topics include: the kinds of reading & writing college students' do, levels of reading & writing; reading & writing in different subjects, organizational skills for reading & writing, reading strategies, basic college vocabulary, understanding writing assignments, essential writing forms (responses to essays), the most common ways to lose grammar & writing marks, critical research skills, bibliography dos and don'ts, avoiding plagiarism, web research skill building (evaluating sites to structured database searching), formatting issues, effective proof-reading and editing, writing in groups and student presentation survival skills.

**ADD 005**
**Addictions: Chemical Dependency and the Adult Learner**
*2 credits, 2 hours lecture*
Students will learn what is meant by addiction. They will look at what kinds of chemicals can be addictive and how to know if you, or a person you know are in danger of addiction. The course will cover alcohol, drugs and gambling. This is an excellent choice if a student is interested in a career in health, education, business or social work.

**AFL 006**
**Entry Language Arts**
*9 credits, 12 hours lecture*
The writing and reading portions of this class will build students' spoken and written vocabulary, writing in context, comprehension, analysis, grammar, creativity, and research skills. Basic Internet and word-processing training is included. A wide variety of reading materials is used to accommodate the particular needs and interests of each student.

**AFL 007**
**Intermediate Language Arts**
*9 credits, 12 hours lecture*
This course builds on the knowledge and skills developed in the Entry level of Academic Foundations. Modules will cover writing in context (grammar and spelling), vocabulary building, critical reading and comprehension. Materials will have an adult orientation, including science and social studies topics. Students will create and maintain portfolios of their work for evaluation.

**AFL 009**
**Advanced Language Arts**
*9 credits, 12 hours lecture*
This course builds on the knowledge and skills developed in the intermediate level of Academic Foundations and will cover advanced grammar and vocabulary building. Context-based reading is available to build critical reading and comprehension skills. Students will create and maintain portfolios of their work for evaluation.

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**AFM 006**
**Entry Math**
*6 credits, 8 hours lecture*
AFM 006 will cover all four operations (addition, subtraction, multiplication and division) on whole numbers, fractions and decimals including order of operations. An introduction to the language of algebra and the solving of one step linear equations, calculating the perimeter and area of basic polygons and the interpretation of graphed data will be explored.

**AFM 007**
**Intermediate Math**
*6 credits, 8 hours lecture*
AFM 007 will apply a review of whole numbers, fractions and decimals to all operations (addition, subtraction, multiplication and division) on integers, signed fractions and signed decimals including order of operations. Students will apply their number sense to the solving of ratio, proportion and percent applications as well as the interpretation of data presented in various charts or graphs. Algebra will be explored through the solving of one step linear equations. Perimeter and area of two dimensional shapes will be explored and applied to the volume of three dimensional figures, with a focus on circles and triangles.

**AFM 009**
**Advanced Math**
*6 credits, 8 hours lecture*
AFM 009 will review all four operations (addition, subtraction, multiplication and division) on rational numbers including rational and irrational square roots. Students will explore algebra including the simplifying of the exponent laws, algebraic expressions and polynomial operations. Students will also explore the solving of linear equations (two or more steps) and linear inequalities in one variable as well as the graphing of linear equations in two variables. A review of two and three dimensional measurement will be applied to volume and surface area, the Pythagorean Theorem and circle properties. Students will apply their number sense to the application of probability in our society.

**ANPH 100**
**Anatomy & Physiology I**
*3 credits, 45 hours lecture*
Anatomy and Physiology is a theory course in the basic sciences. Students in this course will study human anatomy and physiology using the body systems approach. Emphasis is placed on the interrelationships between form and function at the gross and microscopic level of organization, and on unifying themes, such as homeostasis. Topics include basic anatomical and directional terminology; functional concepts and principles of cell biology, histology; the integumentary, muscular skeletal, nervous, special senses, and endocrine system. The principles and processes of microbiology will be introduced.
*Prerequisite: Biology 30*

**ANPH 101**
**Anatomy & Physiology II**
*3 credits, 45 hours lecture*
Anatomy and Physiology is a theory course in the basic sciences. Students in this course will study human anatomy and physiology using the body systems approach. Emphasis is placed on the interrelationships between form and function at the gross and microscopic level of organization, and on unifying themes, such as homeostasis. Topics include absorption, diffusion and excretion, respiratory, digestive, urinary, cardiovascular, blood, lymphatics, tissues, and reproductive systems. Fluid/electrolyte and acid base balance will also be introduced.
*Prerequisite: ANPH 100*

**ANTHR 101**
**Introductory Anthropology**
*3 credits, 3 hours lecture*
This course provides a general introduction to the four major subfields of Anthropology: Cultural Anthropology, Linguistic Anthropology, Archaeology and Physical Anthropology. This introduction will be through the study of central concepts and key issues such as: the appearance of culture, human evolution, social organization, cultural theory, symbolic systems and culture change.

**ANTHR 110**
**Gender, Age and Culture**
*3 credits, 3 hours lecture*
This course presents an anthropological review and comparison of cultures (globally) in terms of social positions based on differences in sex and age. What does it mean to be female, male, middle-aged or old? This introductory course examines the cultural construction of the categories of gender and age to see how these ideas vary cross-culturally and how they influence our ideas of normal behaviour and practice. Readings, films and guest speakers will complement class lectures and presentations.

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**ANTHR 150**
**Race and Racism in the Modern World**
*3 credits, 3 hours lecture*
This course will study the challenge of racism in modern societies and the response of anthropology, including the history of how the 'race' concept has been used to explain human variation. Topics will include multiculturalism, ethnic (or cultural) identity, prejudice, ethnocentrism, 'silent' and 'overt' racism, eugenics and the persistence of ethnic identity in the face of globalization. Case studies from different parts of the world (rural and urban, in times of war and of peace) will be used to define and illustrate these concepts, including current issues of interest in Canada. This course will include a combination of lectures, readings, films and guest speakers.

**ANTHR 207**
**Introduction to Social and Cultural Anthropology**
*3 credits, 3 hours lecture*
This course provides an overview of the aims, concepts, methods and theoretical approaches of social/cultural anthropology. Attention will be given to the main topical concerns of the discipline (including but not restricted to kinship and marriage, political and economic organization, religion and cosmology), and throughout the course the focus will be on the nature of, and explanations for social and cultural variation around the world and over time.
*Prerequisite: a 100-level Anthropology course or permission of the Program Chair*

**ANTHR 250**
**North American Aboriginal Peoples**
*3 credits, 3 hours lecture*
This course is an introduction to Aboriginal Peoples of North America using anthropological concepts such as culture areas (Northwest Coast, Desert Southwest, Plains, and Subarctic, for example). The readings include selected classic ethnographies (detailed descriptions of Native people and their cultural ways written by anthropologists who have conducted long-term fieldwork with Indigenous groups). The course also provides students with a wealth of selected films on Native culture groups which illustrate their diversity, ceremonial and traditional histories, as well as contemporary issues, concerns and life ways. This course requires no prior knowledge of Aboriginal Peoples.

**ANTHR 260**
**Aboriginal Peoples Living in Cities**
*3 credits, 3 hours lecture*
Well over one-half of all Native people in Canada are now living in cities and towns rather than on reserves or in rural areas. In this course we will examine the cultural dynamics of Urban Aboriginal Peoples, including: their construction of distinct Native communities within cities, their endeavours concerning formal and informal education, their efforts regarding health issues and solutions, their cultural healing and revitalization movement, the effects of gangs and poverty on certain segments of the Urban Native population and many other important factors in the relatively recent Urban Aboriginal phenomenon. We will also briefly compare and contrast the history of Urban Native Peoples in Canada with that of the United States. Films and guest speakers will augment our mandatory readings and lectures. This course requires no prior knowledge of Aboriginal Peoples.

**ANTHR 320**
**Anthropology of Religion**
*3 credits, 3 hours lecture*
This course is a survey of anthropological approaches to religions and related phenomena including magic, taboo, shamanism and witchcraft. There is an emphasis on the connection between religious ideas and practices and other aspects of social life in a variety of cultures. The creation and use of meaning and symbols as a way of reifying religious truth will also be addressed. The social construction of belief systems or shared ideas people learn as they grow up in a given society will be explored in the context of both Western and non-Western cultures through lectures, readings, student seminar presentations, films and guest speakers.
*Prerequisite: ANTHR 207 or permission of the Program Chair*
*NOTE: Not open to students with credit in ANTHR 420*

**ANTHR 366**
**Theories of Culture Change**
*3 credits, 3 hours lecture*
Anthropological theories of the nature of socio-cultural systems and the processes of culture change in conjunction with examples from selected cultural case studies. Case studies will be taken from various geographical locations, a variety of human societies (both macro and micro-cultures) and a range of historical and contemporary time frames.
*Prerequisite: ANTHR 207 or permission of the Program Chair*

**ART 100**
**Introduction to Contemporary Art**
*3 credits, 3 hours lecture*
An introduction to the issues and artists that are affecting art today. Through videos, lectures, gallery visits and artist lectures this course will consider the media, issues and styles in contemporary art. Open to art and non-art majors.

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**ART 101**
**Print Through Drawing**
*3 credits, 6 hours lecture-laboratory*
This studio based course will emphasize graphic imagery and drawing systems. Concepts will be integrated with technique using the printmaking processes of mono print, incised images of dry-point, engraving, etching, linocut, woodcut and collograph in order to explore the formal art elements of pictorial arrangement: line/linear composition, value; shapes and patterns, texture, weight and balance, volume with the illusion of depth.

**ART 232**
**Visual Fundamentals**
*3 credits, 6 hours lecture-laboratory*
A studio based introduction to 2D media for art and non-art majors. Studio projects are designed to develop an understanding of the media, elements, principles and concepts of 2D art and design.

**ART 233**
**Visual Fundamentals II**
*3 credits, 6 hours lecture-laboratory*
A studio based introduction to 3D media for art and non-art majors. Studio projects are designed to develop an understanding of the media, elements, principles and concepts of 3D design and sculptural form.

**ART 240**
**Introductory Drawing I**
*3 credits, 6 hours lecture-laboratory*
Drawing is a broad term which encompasses many different media, modes of expression and execution. Students are introduced to a wide range of drawing activities so that they may be made aware of as many modes of expression as possible. Students work from models and still-life situations, as well as specific projects designed to highlight formal abstract qualities inherent in drawing. Emphasis is placed on the structural elements that constitute drawing.

**ART 291**
**Media in Art I**
*3 credits, 6 hours lecture*
The primary objective for this introductory class will be to develop an understanding of contemporary media as art forms. Students will work with two-dimensional computer graphics, photography and video. The class addresses the interdisciplinary and creative objectives of multi-media.
*Prerequisite: Admission to Art & Design Certificate or permission of the Program Chair*

**ART 292**
**Media in Art II**
*3 credits, 6 hours lecture*
A continuation of Art 291, this class will focus on an introduction to three-dimensional computer animation, audio systems and a continuation of photography and video. The class continues to address the interdisciplinary and creative objectives of multi- media.
*Prerequisite: ART 291 or permission of the Program Chair*

**ART 293**
**Art in Media III**
*3 credits, 6 hours lecture*
The course will focus on an introduction to creating digital images for both fine art and graphic design. Students will explore both the technical aspects of digital manipulation, as well as the basic concepts and practice of communication design using Adobe software and printing with the Epson Stylus 9800 44" Inkjet Printer.

**ART 312**
**Introductory Painting I**
*6 credits, 6 hours lecture*
This studio-based course is designed to promote the development of students' critical and visual awareness. The components of painting the hand, eye and the mind are dealt with throughout the course, mainly on a project-oriented basis. Through those projects, students develop skills and understanding of the visual language of painting.
*Prerequisites: ART 232 and ART 233 or permission of the Program Chair*

**ART 313**
**Introductory Painting II**
*6 credits, 6 hours lecture*
This course is a continuation of Art 312. The emphasis is on both the technical and aesthetic elements in painting as well as the individual needs and aspirations of each student. Assignments will be given to enable the student to best come to terms with the language and process of painting. Experimentation with the medium will be encouraged to enable the student to realize the potential of the material they are working with.
*Prerequisites: ART 232, ART 233 and ART 312 or permission of the Program Chair*

**ART 324**
**Introductory Relief Printmaking**
*3 credits, 6 hours lecture-laboratory*
This studio course explores the basic possibilities of relief printing including woodcuts and linocuts. The objective is to become familiar with the conceptual, expressive and technical possibilities of the medium so that it may be placed in service of individual artistic investigations. Equal emphasis will be given to aesthetic and technical concerns.

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**ART 325**
**Introductory Silkscreen**
*3 credits, 6 hours lecture*
This studio course explores the basic possibilities of silkscreen printing. The objective is to become familiar with the conceptual, expressive and technical possibilities of the medium so that it may be placed in service of individual artistic investigations. Equal emphasis will be given to aesthetic and technical concerns.
*Prerequisites: ART 232 and ART 233 or permission of the Program Chair*

**ART 326**
**Introductory Intaglio**
*3 credits, 6 hours lecture*
This studio course explores the basic possibilities of intaglio including drypoint, etching, aquatint and collagraphs. The objective is to become familiar with the conceptual, expressive and technical possibilities of the medium so that it may be placed in service of individual artistic investigations. Equal emphasis will be given to aesthetic and technical concerns.
*Prerequisites: ART 232 and ART 233 or permission of the Program Chair*

**ART 327**
**Introductory Lithography**
*3 credits, 6 hours lecture*
This studio course explores the basic possibilities of lithography from both stones and aluminum plates. The objective is to become familiar with the conceptual, expressive and technical possibilities of the medium so that it may be placed in service of individual artistic investigations. Equal emphasis will be given to aesthetic and technical concerns.
*Prerequisites: ART 232 and ART 233 or permission of the Program Chair*

**ART 340**
**Introductory Drawing II**
*3 credits, 6 hours lecture-laboratory*
Drawing is a broad term which encompasses many different media, modes of expression and execution. This course will continue the introduction that was begun in Art 240. Emphasis will be placed on further developing the students' drawing ability through the investigation of a wide selection of drawing materials and situations.
*Prerequisite: ART 240 or permission of the Program Chair*

**ART 362**
**Introductory Sculpture I**
*6 credits, 6 hours lecture*
Foundation studies in sculpture. The primary objective for this class will be to develop an understanding of fashioning objects by methods of assembly, modeling and carving.
*Prerequisites: ART 232 and ART 233 or permission of the Program Chair*

**ART 363**
**Introductory Sculpture II**
*6 credits, 6 hours lecture*
Further foundation studies in sculpture. A continuation of the processes of fashioning objects will be pursued.
*Prerequisite: ART 362 or permission of the Program Chair*

**ART 393**
**Media in Art III**
*3 credits, 6 hours lecture*
General principles of digital image processing. Students will explore both the technical aspects of digital manipulation, as well as the artistic and conceptual methods for building complex imagery on the computer. Emphasis on vector and raster-based software for commercial and fine art applications.
*Prerequisites: ART 291 and ART 292*

**ART 394**
**Media IV: Digital Video Imaging**
*3 credits, 6 hours lecture*
General principles of the relationships between digital video and image processing. Students will explore both the technical aspects of video manipulation, as well as the artistic & conceptual methods for building complex video image and sound environments with computer software. Emphasis on Final Cut Pro software for commercial and fine art applications.
*Prerequisites: ART 291 and ART 292 or permission of the Program Chair*

**ART 396-399**
**Independent Study**
*3 credits, 2 hours lecture*
This course allows students to pursue advanced projects through independent study with an advisor from the department.
*Prerequisites: Completion of all courses offered within chosen specialization or permission of the Program Chair*

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**ART 441**
**Drawing III**
*3 credits, 6 hours lecture*
Drawing is a broad term which encompasses many different media, modes of expression and execution. Students are introduced to a wide range of drawing activities so that they may be made aware of as many modes of expression as possible. Students focus mainly on contemporary approaches to drawing. Students will be given specific projects designed to highlight continuing themes such as abstraction, human form, portraiture as well as looking at contemporary artists that deal with drawing as an art form. Emphasis is placed on the theory that provides a framework for modern Drawing themes.
*Prerequisites: ART 240 and ART 340*

**ART 442**
**Drawing IV**
*3 credits, 6 hours lecture*
Drawing is a broad term which encompasses many different media, modes of expression and execution. Students are introduced to a wide range of drawing activities so that they may be made aware of as many modes of expression as possible. Students focus mainly on contemporary approaches to drawing. Students will be given specific projects designed to highlight continuing themes such as abstraction, human form, portraiture as well as looking at contemporary artists that deal with drawing as an art form. Emphasis is placed on the theory that provides a framework for modern Drawing themes.
*Prerequisites: ART 240 and ART 340*

**ARTH 101**
**Introduction to the History of Art I**
*3 credits, 3 hours lecture*
This course is a survey of art-painting, sculpture and architecture from prehistory to the end of the 14th century. The course concentrates on the art of western (European based) cultures with consideration given to the important social, historical and cultural events that impact on the development of art.

**ARTH 102**
**Introduction to the History of Art II**
*3 credits, 3 hours lecture*
A continuation of ARTH 101, this course is a survey of art – painting, sculpture and architecture from the 15th century to the beginnings of modern art in the mid 19th century. The course concentrates on the art of western (European based) cultures with consideration given to the important social, historical and cultural events that impact on the development of art.

**ARTH 271**
**Survey of Nineteenth Century Art I**
*3 credits, 3 hours lecture*
An examination of the visual arts, especially painting and sculpture in Europe during the first half of the 19th century. As background, the course begins with the rise of Neoclassicism and the reaction against the Rococo around the time of the French Revolution and continues by tracing developments in art with the Romantic movements during the early 19th century.

**ARTH 272**
**Survey of Nineteenth Century Art II**
*3 credits, 3 hours lecture*
A continuation of Art History 271. An examination of the visual arts, especially painting and sculpture, in Europe during the second half of the 19th century. The course traces the development and influence of art movements such as Realism, Impressionism, Post-Impressionism and Symbolism, and emphasizes the struggle against the domination of the Academy and of academic art in the later 19th century.

**ARTH 273**
**Survey of Early Canadian Art**
*3 credits, 3 hours lecture*
A history of the visual arts, especially painting and sculpture in Canada from the time of the first European explorers in the 16th century up to the early 20th century, including the work of the Group of Seven. The course emphasizes the growth of national concerns in the art of a developing country.

**ARTH 281**
**Survey of Twentieth Century Art I**
*3 credits, 3 hours lecture*
This course is a study of major art movements in Europe and North America up to World War II. The course includes an examination of such movements as Fauvism, Cubism, Futurism, Dada and Surrealism.

**ARTH 282**
**Survey of Twentieth Century Art II**
*3 credits, 3 hours lecture*
This course is a continuation of ARTH 281, and is a study of major art movements in Europe and North America since World War II. The course includes an examination of recent painting and sculpture, as well as considering less conventional art forms, such as installation, earthworks, and performance art.

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**ARTH 283**
**Survey of Twentieth Century Canadian Art**
*3 credits, 3 hours lecture*
A continuation of Art History 273. A history of the visual arts, especially painting and sculpture in Canada from the early 20th century to the present day. The course emphasizes the shift in Canadian art from national concerns to international modernism.

**ASTRO 120**
**The Solar System**
*3 credits, 3 hours lecture*
This course discusses the development of astronomy and astronomical techniques, including results obtained from the latest orbiting observatories such as the Hubble Space Telescope, Galileo Probe and Mars Global Surveyor. The origin, evolution and nature of the Earth, Moon, Sun, the other planets and non-planetary bodies in the solar system will be discussed. One component of this course is accessible to the public through Keyano's non-credit offerings.
*Prerequisites: Math 30-1 and Physics 30 or permission of Program Chair*

**ASTRO 122**
**Stars and Galaxies**
*3 credits, 3 hours lecture*
This course discusses the development of our understanding of the Universe, including current models of stellar evolution and cosmology. Emphasis is placed on understanding the physical processes underlying astronomical phenomena. One component of this course is accessible to the public through Keyano's non-credit offerings.
*Prerequisites: Math 30-1 and Physics 30 or permission of the Program Chair*

**BIOCH 200**
**Introductory Biochemistry**
*3 credits, 3 hours lecture*
An introduction to the fundamental principles of biochemistry. Protein structure and function, structure of nucleotides and nucleic acids, structure and function of biological membranes, metabolism of carbohydrates, lipids, nitrogen, the regulation and integration of cellular metabolism, and bioenergetics.
*Prerequisites: CHEM 101 and CHEM 161 or CHEM 261*

**BIOL 025**
**Biology 25**
*6 credits, 6 hours lecture*
Topics studied include: cells, protein synthesis, DNA, genetics, principles of classification and ecology. Alberta Education Course Equivalency: Biology 10 and Biology 20
*Co-requisites: ENGL 013 or ENGL 010 or permission from the Program Chair*

**BIOL 030**
**Biology 30**
*5 credits, 6 hours lecture, 2 hours lab on alternate weeks*
Topics studied include the scientific method, principles of classification and population ecology, biological macromolecules, DNA and protein synthesis, cells and cell membranes, enzyme structure and function, human body systems (anatomy and physiology) and the concept of homeostasis.
*Alberta Education Course Equivalency: Biology 30*
*Prerequisite: BIOL 025 or equivalent or permission from the Program Chair*

**BIOL 107**
**Introduction to Cell Biology**
*3 credits, 3 hours lecture, 3 hours lab*
The properties and functions of organisms depend upon those of individual cells. To understand organisms, it is necessary to understand cells. The course will begin with an examination of the natural origin of life and of cells. There will be an introduction to cellular structure and function, beginning with prokaryotic cells, followed by eukaryotic cells. This will be followed by an examination of cell respiration, photosynthesis and a discussion of how cell compartmentalization is important for efficient cell functioning. Control of cell functioning and structure will be explored through an examination of the molecular nature and expression of the genetic material. The course will finish with an introduction to the application of genetic knowledge in genetic engineering and biotechnology.
*Prerequisites: Biology 30 and Chemistry 30*

**BIOL 108**
**An Introduction to Biodiversity**
*3 credits, 3 hours lecture, 3 hours lab*
Our planet supports a remarkable diversity of life. This course will discuss the history of life on earth, the evolutionary processes that gave rise to the biodiversity of earth, and how the relationships among organisms are reflected in their classification. Principles that unite all living things as well as unique adaptations that characterize major lineages will be discussed using examples from the three Domains of life. Laboratory exercises investigate the diversity of biological form and function, and introduce students to scientific methodology, data collection and scientific writing.
*Prerequisite: Biology 30*

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**BIOL 201**
**Eukaryotic Cellular Biology**
*3 credits, 3 hours lecture*
A dissection of eukaryotic cells from the molecular to functional level. Specific emphasis will be given to molecular functioning of the membrane, cytoskeleton, endocytosis, intracellular transport, nucleus structure, DNA replication, mitosis, cytokinesis, endomembrane bound organelles, exocytosis, cell-cell signalling and regulation of cellular replication.
*Prerequisite: BIOL 107*
*Prerequisite or Co-requisite: Any University Level Chemistry Course*
*NOTE: Not available to students with credit in or enrolled in CELL 201*

**BIOL 207**
**Molecular Genetics and Heredity**
*3 credits, 3 hours lecture, 3 hours lab*
This course examines the chromosomal and molecular basis of gene function and transmission. The regulatory mechanisms controlling the expression of the genetic material in both prokaryotes and eukaryotes are considered. Students gain experience with classical genetics and current molecular biology techniques used in the isolation of specific genes and the construction of genetic and physical maps of genes and genomes.
*Prerequisite: BIOL 107*

**BIOL 208**
**Principles of Ecology**
*3 credits, 3 hours lecture, 3 hours lab*
Biology 208 deals with the principles of ecology including the interactions between organisms and their environment resulting in the formation of communities, ecosystems and biomes. Biology 208 is a core course in the department of biology and is required for animal biology, bioinformatics, cell biotechnology, environmental biology, evolutionary biology, microbiology, molecular genetics, physiology and plant biology.
*Prerequisite: BIOL 108*

**BOT 205**
**Fundamentals of Plant Biology**
*3 credits, 3 hours lecture, 3 hours lab*
This course is an overview of the diversity and biology of organisms traditionally included in the Plant Kingdom (algae, fungi, lichens, mosses, ferns, gymnosperms and flowering plants). Adaptations which allow plants to inhabit particular ecosystems and biomes are examined, with an emphasis on structural and functional innovations and the evolution of reproductive strategies. Symbioses and co-evolutionary relationships between plant species and between plants and other groups of organisms are also considered.
*Prerequisite: BIOL 108*

**BUS 100**
**Business Communications**
*3 credits, 4 hours lecture*
From memos and letters to short informal reports, this course reviews the basics of business writing format and technique. It offers a complete refresher on grammar, punctuation and sentence structure, as well as a brief introduction to the art of speech making. Course content includes the following: concise, direct written expressions, sentence clarity and variety, effective research strategies, short informal reports and brief oral presentations that achieve results. This course provides an opportunity to brush up your writing skills and other business communication skills before proceeding to more advanced classes.
*Prerequisites: English 30/30-1 or 33/30-2*

**BUS 101**
**Report Writing and Presentations**
*3 credits, 4 hours lecture*
Business students can improve their skills in two specific areas: research strategies and report writing; and design and delivery of business presentations. The writing component of the course covers a broad spectrum of business documents, from short informal reports to formal reports and proposals. The oral communication component of the course introduces students to speeches designed for a variety of business purposes. Three specific presentations are required: a demonstration speech, an informative speech based on the formal report topic and a persuasive presentation. Students also are required to analyze business communication problems in groups and to present the cases.
*Prerequisites: BUS 100 or ENGL 108 or permission of Program Chair*

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**BUS 102**
**Interpersonal Skills for Business**
*3 credits, 2 hours lecture, 1 hour tutorial*
Develops the interpersonal communication skills that managers need in order to function effectively in the contemporary organization. Making extensive use of behavioural simulation techniques such as role-playing and group problem-solving, students will learn active listening, conflict-management, persuasion, delegating and other general purpose skills. The course will also deal with the specialized skills and techniques needed in performance appraisal, discipline, group meeting and goal-setting situations.

**BUS 103**
**Introductory Business Computing**
*3 credits, 4 hours lecture*
The students will be introduced to the principles of computers and data processing. This is achieved through the analysis and use of hardware and microcomputer business software. Hands-on usage of application software is stressed throughout the course. Applications focused on are word processing, financial spreadsheets, presentation packages and project schedulers. Actual applications covered will depend on software availability and interest level in the application areas.

**BUS 110**
**Business Mathematics**
*3 credits, 5 hours lecture*
Students will cover (a) a review of basic algebra, ratio and proportion and linear systems; (b) the mathematics of Business Management including the calculation of depreciation, discounts, simple interest and mark-ups; and (c) the mathematics of finance which includes compound interest, future value, present value, annuities, amortization, bond valuation, sinking funds and discounted cash flows. It is expected that two-thirds of the course will focus on item (c). An emphasis on the use of word problems and small case studies will be stressed to bring the real world usefulness of the material to light.
*Prerequisites: Math 30/33 or Math 30-2*

**BUS 111**
**Statistics I**
*3 credits, 3 hours lecture, 2 hours lab*
Students are introduced to basic statistical concepts and procedures used to solve business problems. Topics covered include: data graphics and charts, measures of central tendency and dispersion, elementary probability, probability and sampling distributions, interval estimation, hypothesis-testing regression and correlation. Students will also develop competence in the use of data analysis software.
*Prerequisite: BUS 103*

**BUS 121**
**Work Term I**
*9 credits, 37.5 hours practicum*
Students in a Co-op Education program will be registered under this course number for their fi work placement, following the completion of Year I of their academic program. Prerequisite: Complete first year of Business Administration program

**BUS 130**
**Introductory Accounting I**
*3 credits, 5 hours lecture*
An introduction to the subject of accounting will be provided. The major objective of BUS 130 and BUS 131 is to foster an understanding of accounting and the way it serves in developing useful information which will provide a basis for sound business decisions. Topics of study include the procedural matters relating to the complete double entry accounting cycle, including special journals, subsidiary and general ledgers, worksheets and the preparation of financial statements.
*Prerequisites: Math 30/33 or Math 30-2*

**BUS 131**
**Introductory Accounting II**
*3 credits, 5 hours lecture*
Students continue with topics from BUS 130 such as: partnership accounting, formation of corporations, analysis of financial statements and the statement of changes in financial position. The emphasis in this course is on the development of a sound understanding of accounting by means of practical examples.
*Prerequisite: BUS 130*

**BUS 191**
**Management**
*3 credits, 4 hours lecture*
To manage organizations successfully, front line supervisors must follow concepts and practices of effective supervision and human relations. This course deals with basic managerial functions of supervisors and the strategies they need to become "well rounded total persons". Major topics include decision-making, planning, organizing, directing, controlling, communicating, motivating and strategies for improving the work environment.

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**BUS 204**
**Accounting Software Applications**
*3 credits, 4 hours lecture*
Students' hands-on usage of microcomputer business software that began in BUS 103 continues. The class focuses on computerized accounting and also enhances the students' abilities with the Windows operating system. Other types of application packages, such as databases, will be introduced, as will advanced functions on spreadsheets and word processors.
*Prerequisites: BUS 103 and BUS 130*

**BUS 211**
**Statistics II**
*3 credits, 4 hours lecture*
This course is a continuation of BUS 111, with more concentration on regression and correlation analysis, time series analysis, simulation, forecasting, application of samples, decision analysis, project scheduling and so on.
*Prerequisite: BUS 111*
*NOTE: Students requiring this course for their CGA designation may take the equivalent Athabasca University course, MGSC 312*

**BUS 212**
**Human Resources Management Methods**
*3 credits, 3 hours lecture*
This course deals with information technologies and quantitative techniques as they are applied in Human Resource Management. Specific topics include the following: design, development and use of Human Resource Information Systems, graphical and numerical description of data sets, forecasting techniques (specifically applied to labour supply/demand), regression and correlation analysis (particularly as it applied to validation of selection tools). This course includes a computer lab component so that students can get some hands-on experience with the tools studied.
*Prerequisite: BUS 271 or permission of the Program Chair*

**BUS 221**
Work Term II
9 credits, 37.5 hours practicum
Students in a Co-op Education program will be registered under this course number for their second work placement.
*Prerequisite: Complete third semester of either BA/CIS program*

**BUS 222**
**Work Term III**
*9 credits, 37.5 hours practicum*
Students in a Co-op Education program will be registered under this course number for their third work placement.
*Prerequisite: BUS 221*

**BUS 223**
**Work Term IV**
*9 credits, 37.5 hours practicum*
Students in a Co-op Education program will be registered under this course number for their fourth work placement.
*Prerequisite: BUS 222*

**BUS 230**
**Intermediate Financial Accounting I**
*3 credits, 5 hours lecture*
Accounting theory and practice are covered at an intermediate level. The income statement and balance sheet are studied in depth. Other topics will include such items as cash flow, receivables, inventories, capital assets, investments and current liabilities. The emphasis in the course will be on practical conditions using a problem solving approach to accounting situations.
*Prerequisites: BUS 110 and BUS 131*

**BUS 231**
**Intermediate Financial Accounting II**
*3 credits, 5 hours lecture*
Accounting theory and practice are covered at an intermediate level. The statement of changes in financial position is studied in depth. Other topics will include such items as long-term investments in corporate securities, current liabilities, long-term liabilities, leases, pensions, deferred taxes, contributed capital, stock rights, stock options and convertible securities, treasury stock and analysis of financial statements. The emphasis in the course will be on practical conditions, using a problems approach to accounting situations.
*Prerequisites: BUS 110 and BUS 131*

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**BUS 232**
**Corporate Finance**
*3 credits, 4 hours lecture*
The finance function of a business is covered including: the role of a financial manager, the risk-return relationship, capital budgeting analysis, and the impact of debt in a company's capital structure. These ideas are developed through examples from the text and the lecturer. Also, students will have a practical assignment that requires them to observe the trading behaviour of a common stock in a company of their choice. This assignment provides them with an opportunity to observe the role of the capital markets and strongly relates to the concepts discussed during the course.
*Prerequisites: BUS 131*

**BUS 233**
**Management Accounting I**
*3 credits, 4 hours lecture*
Students are provided with a knowledge of the fundamentals of cost accounting methods and procedures. Initially, students learn cost concepts, the cost accounting cycle, cost terminology and cost behaviour. Next, students focus on job and process costing systems. Other topics may include cost allocation, operation and activity-based costing, standard costs and variance analysis.
*Prerequisite: BUS 131*

**BUS 234**
**Cost Accounting II**
*3 credits, 5 hours lecture*
The accounting function is examined as an information tool of management. The objective is to provide the necessary background so that students gain an appreciation of the corporate accounting system and learn how to weigh alternatives and make decisions concerning a wide variety of managerial problems. Topics covered may include: financial analysis of corporate annual reports, the master budget, various cost systems, standard costs and variance analysis and short and long range planning and decision making.
*Prerequisite: BUS 233*

**BUS 235**
**Auditing**
*3 credits, 3 hours lecture*
The philosophy and practice of auditing is introduced. Initially, the course will cover the conceptual framework of auditing and then expand into practical applications. The fundamental objectives are to develop the skills to assist management to appraise the effectiveness of various operations with a view to enhancing efficiency and profitability.
*Prerequisites: BUS 110 and BUS 131*

**BUS 239**
**Marketing**
*3 credits, 4 hours lecture*
The student is introduced to the highly dynamic field of marketing. Marketing is based on the premise that successful marketing of goods, services and ideas is fundamental to the functioning of our society. The major focus of the course is on understanding marketing, analyzing marketing opportunities and planning marketing strategies related to product, promotion, price and place.

**BUS 240**
**Consumer Behaviour**
*3 credits, 3 hours lecture*
Consumer behaviour is explored from the theoretical perspectives of economics, psychology and sociology. Models of consumer decision-making and basic research methodologies will be introduced. The student will explore the full spectrum of marketing research activities, as they apply to determining and interpreting consumer behaviour. Topics will include research design, instrument development and administration, result interpretation and subsequent application.
*Prerequisite: BUS 239*

**BUS 241**
**Retailing and Merchandising**
*3 credits, 3 hours lecture*
Environmental factors influencing retailing are examined including economic, demographic and technological changes and trends. An overview of basic marketing concepts such as marketing mixes, segmentation and marketing strategies as these concepts relate to consumers' behaviour, will provide a basis from which to examine the world of retailing. Specific attention is given to merchandise management that encompasses information planning and control systems, procurement and inventory control systems, as well as the mechanics of ordering and receiving merchandise.
*Prerequisite: BUS 239*

**BUS 242**
**Introductory Marketing Research**
*3 credits, 4 hours lecture*
Students are introduced to marketing research and its use in organizational decision-making. Major topics to be covered include: the place of research in marketing, research designs, data acquisition and analysis and marketing research in action.
*Prerequisites: BUS 110 and BUS 239 (BUS 111 highly recommended)*

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**BUS 243**
**Advertising**
*3 credits, 4 hours lecture*
Students acquire an understanding and appreciation of the role of advertising in our society and in organizations. Advertising will be studied as the major component of "Promotion" in the design of marketing mix strategies. The topics to be studied will include: understanding advertising, audience definition, research and planning, the creative process, media selection and putting the advertising campaign together.
*Prerequisite: BUS 239*

**BUS 244**
**Professional Selling**
*3 credits, 3 hours lecture*
Handling people is the basis of leadership in all endeavors. This ability is little more than salesmanship under another name. It is the universal applications of the principles of selling which justifies its study even by those who never expect to become salespersons. It is the art of handling people and selling ideas to them. This course will involve the use of cases, research presentation, micro sales situations and will rely heavily on classroom discussion and involvement.
*Prerequisite: BUS 239*

**BUS 245**
**Promotions**
*3 credits, 3 hours lecture*
The role of promotion in the design of a marketing mix strategy is examined. Students will understand the dynamics of the promotional mix including sales, advertising, public relations, publicity and trade and consumer sales promotions. Topics will include trade show and event marketing, new media such as the internet and media relations as well as more traditional aspects of promotion. Classroom discussion and involvement through the use of cases or projects is stressed.
*Prerequisite: BUS 239*

**BUS 246**
**Business Ethics**
*3 credits, 3 hours lecture*
This course provides an introduction to business ethics. Part philosophy and part business, the course covers a wide array of ethical issues arising in contemporary business life. Major theoretical perspectives and concepts are presented, including ethical relativism, utilitarianism, deontology and virtue ethics. The lessons explore employee issues and responsibilities, leadership and decision making, morality, diversity, discrimination and ethics in marketing and advertising. Corporate social responsibility is also examined, as are that topics of environmental responsibilities, global ethics and regulation concerns in an era of increasing globalization.

**BUS 251**
**Accounting Information Systems**
*3 credits, 4 hours lecture*
Systems analysis and design is introduced with an emphasis on understanding the concepts of analysis, design and implementation of interrelated information systems. Students will define processes and techniques utilized in information systems analysis and design through the use of case studies. Current computer approaches in information system design and implementation will also be investigated.
*Prerequisite: BUS 204*

**BUS 260**
**Business Law**
*3 credits, 3 hours lecture*
A general knowledge of the laws that govern the formation and effect of commercial contracts and the establishment and operation of business organizations are covered. The overall objective of the course is to provide the student with a practical background of commercial transactions so that the student can deal more effectively and confidently with such transactions. Topics include: laws of contract and tort, creation and organization of sole proprietorships, partnerships and corporations, laws affecting ownership of interest in land, and the nature of employment contracts, insurance agreements, leases, mortgages, agreements of sale, chattel mortgages, conditional sales agreements, debentures and contracts of sale.

**BUS 261**
**Taxation**
*3 credits, 3 hours lecture*
The Income Tax Act is used to analyze the five types of income: employment income, capital gains, income from property, business income, and other income. Deductions from income are also analyzed, as well as the determination of taxes payable. The course focuses on personal taxation, although a brief introduction to corporate taxation is provided toward the end of the course.
*Prerequisite: BUS 232*

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**BUS 262**
**Advanced Taxation**
*3 credits, 3 hours lecture*
In-depth applications approach to the Income Tax Act is covered with a concentration on the corporation and its shareholders with an emphasis on tax planning. Coverage includes computation of income and tax payable for partnerships, trusts and corporations, capital gains, corporate reorganizations, distributions to shareholders, deferred compensation and foreign income and tax treaties.
*Prerequisite: BUS 261*

**BUS 263**
**Business Simulation**
*1.5 credits, 24 hours lab*
Delivered over portions of two weekends, this course contains a comprehensive, integrated software "game" that simulates a real firm in a real industry. Students are asked to compete as a group against other student teams. Business decision making skills are examined under the duress of competitive pressures, time pressures, and in a team setting.
*Prerequisite: Completion of Accounting or Business certificate*
*Co-requisite: Enrollment in or completion of at least 3 additional second year courses of the appropriate diploma program*

**BUS 264**
**Integrated Case**
*1.5 credits, 21 hours lab*
A comprehensive final examination to the program within a group setting is represented by this course. Students compete against one another as consultants solving real life business problems that have been presented in a case competition format.
*Prerequisite: Completion of all other Accounting or Business Diploma courses*

**BUS 270**
**Organizational Behaviour**
*3 credits, 4 hours lecture*
Important theories and research in the Behavioural Sciences are examined and a framework for understanding and predicting human behaviour in the workplace is provided. Topics studied include personality, perception, attitudes, motivation, leadership, job design, organizational design, group dynamics and decision- making processes. The focus is on explaining differences in work effort, performance, absenteeism, turnover and job satisfaction among individuals in the organization.

**BUS 271**
**Human Resource Management**
*3 credits, 4 hours lecture*
The complex and strategically important field of Human Resource Management (HRM) is surveyed, providing a comprehensive understanding of the HRM function and its place in the contemporary organization. The course also provides a base of practical knowledge about topics such as employment equity, recruitment and selection, job analysis, compensation, benefits administration, performance appraisal, health and safety administration and employment law.

**BUS 272**
**Industrial Relations**
*3 credits, 3 hours lecture*
Dealing with the interaction of unions and employers in the framework of collective bargaining. This specialized Human Resource Management course focuses on the three key activities included in the Industrial Relations system: union certification, contract negotiations and grievance administration. Additional topics include the evolution of labour law, the structure and development of the Canadian labour movement and industrial relations in the public sector. The course makes use of case discussions and bargaining simulation exercises in addition to the lecture/ discussion method.

**BUS 273**
**Organizational Theory**
*3 credits, 4 hours lecture*
Organizational Theory is concerned with the relationship of organizational design to organizational effectiveness. The course is based on the assumption that management decisions about the structure of the organization, for instance the number of levels in the management hierarchy or the pattern of departmentalization, influence the performance and the survival prospects of the organization. The course describes and evaluates a range of contemporary and historical designs, including, amongst others, the bureaucratic, functional, divisional, matrix and network structures. The implications that factors such as organizational size, strategy, environment, technology and use of power have for organizational design decisions are examined in depth.
*Prerequisite: BUS 270*

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**BUS 274**
**Staffing**
*3 credits, 3 hours lecture*
This course begins with an examination of the different methods and information sources used to forecast an organization's need for human resources. Then, the course addresses various recruitment techniques with emphases on the identification of effective sources and media for particular types of jobs, and on the design of effective recruitment messages. The third and largest portion of the course examines the range of tools and techniques used to select the best candidate from a pool of recruits, including Application Banks, Interviewing, Selection Tests and Background (Reference) checks.
*Prerequisite: BUS 271 or permission of the Program Chair*

**BUS 275**
**Critical Thinking**
*3 credits, 3 hours lecture*
Students are introduced to analysis and evaluation of the kinds of arguments, theories and problems that are commonly encountered in everyday life. Course material is derived from daily media, textbooks and business situations. Students will improve their own arguments and presentations by drawing sound conclusions from available evidence and arranging reasons well to support conclusions. Topics include detection and diagrams of arguments, syllogisms, fallacies, inductive reasoning, misuse of statistics, empirical and conceptual theories and problem solving.

**BUS 276**
**Benefits & Compensation Management**
*3 credits, 3 hours lecture*
This course takes a detailed look at the methods used to determine fair and competitive wage and salary levels (i.e. Job Evaluation), provides an extensive critical survey of performance-based and knowledge-based compensation systems, and provides an in- depth treatment of the complex topic of supplemental benefits.
*Prerequisite: BUS 271 or permission of the Program Chair*

**BUS 277**
**Health & Safety/Loss Management**
*3 credits, 3 hours lecture*
This course begins with an in-depth look at the provisions of Health & Safety legislation, particularly in the province of Alberta. The common types and causes of workplace injury and work-related disease are then reviewed, in order to identify the primary on-the-job risk exposures. The main part of the course critically examines different approaches to Accident Prevention in the workplace and also looks at the emerging trend of wellness programs.
*Prerequisite: BUS 271 or permission of the Program Chair*

**BUS 278**
**Training & Development**
*3 credits, 3 hours lecture*
This course covers the procedures involved in developing and implementing a training program, and also provides participants with practical instructional skills. Topics include: training and development compared, methods for the determination of training needs, critical survey of training and development methods, instructional techniques, systematic assessment of training/ development courses and programs.
*Prerequisite: BUS 271 or permission of the Program Chair*

**BUS 279**
**Performance Management**
*3 credits, 3 hours lecture*
In general terms, this course reviews strategies for optimizing employee performance and behaviour in the workplace. Topics include: goal-setting theory, determination of performance criteria, qualitative and quantitative appraisal techniques and disciplinary procedures.
*Prerequisite: BUS 271 or permission of the Program Chair*

**BUS 291**
**Advanced Supervision**
*3 credits, 3 hours lecture*
Operational strategies available to managers for utilizing human resources more effectively are the focus of this course. It combines supervision concepts and practices to integrate managerial functions for dealing with organizational situations. Major areas of concern in this course are: planning and controlling, structuring and staffing, directing and influencing and societal concerns affecting organizational life.
*Prerequisite: BUS 191*

**BUS 293**
**New Enterprise Development**
*3 credits, 3 hours lecture*
Business plan development is derived by: monitoring the economic and social environment to identify opportunities for a business venture, researching those opportunities and preparing the actual business plan. The course gives students an opportunity to demonstrate knowledge gained in prior courses, such as marketing and accounting. Students will work in groups on their business plan as this ensures a mix of skills and talents.
*Prerequisites: BUS 110, BUS 131 and BUS 239*

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**BUS 294**
**Project Management**
*3 credits, 3 hours lecture*
This course introduces students to project management. The course will explore the entire lifecycle of a project from inception to completion including project initiation, project planning, project execution, project monitoring & control, project completion. Students will learn the basic concepts of project management, the process to initiate and plan a project, what is required to execute, monitor and control project and the steps to close a project. Working in groups, students will be expected to develop and complete an approved project using the Project Management Book of Knowledge (PMBOK).

**BUS 295**
**Quality Management**
*3 credits, 4 hours lecture*
Concepts and practices of the management of product quality in a business organization are introduced. The course will utilize a Total Quality Management (TQM) perspective. Initially, students will learn the principles by which a consumer-based definition of quality is determined, and then develop methodologies, tools and practices which ensure that quality is 'built into' products (meaning manufactured goods and/or services). Various tools, such as Pareto charts, x-charts and cause-and-effect diagrams will be developed, as well as more comprehensive techniques such as Quality Function Deployment (QFD). Relevant organizational issues such as the need for quality data and information systems and the role of leadership, will also be examined. Students will be expected to display competence in the use of the techniques and practices in various quality measurement and enhancement projects. Several group projects will be assigned.
*Prerequisites: BUS 110 and BUS 191 (BUS 111 highly recommended)*

**BUS 296**
**Operations Management**
*3 credits, 3 hours lecture*
The area of operations management is introduced by focusing on quantitative skills managers need to operate a production or service fi A variety of planning and decision-making tools are introduced. The course may deal with but will not be limited to tools that deal with facility location, internal layout, capacity planning, quality control, inventory control, process planning, forecasting, project scheduling, etc.
*Prerequisites: BUS 110 and BUS 191 (BUS 111 highly recommended)*

**BUS 297**
**Selected Topics in Management**
*3 credits, 3 hours lecture*
Periodically the Business Administration Department will offer courses in specialized topics which are not included in the department's normal course offerings. Such courses will be offered under this course name and number. The specialized focus of each offering of this course will be announced in advance. The topic(s) studied will depend on the availability of an appropriately qualified instructor.
*Prerequisite: Permission of the Program Chair*

**BUS 298**
**Selected Topics in Management**
*3 credits, 3 hours lecture*
Periodically the Business Administration Department will offer courses in specialized topics which are not included in the department's normal course offerings. Such courses will be offered under this course name and number. The specialized focus of each offering of this course will be announced in advance. The topic(s) studied will depend on the availability of an appropriately qualified instructor.
*Prerequisite: Permission of the Program Chair*

**BUS 299**
**Strategic Management**
*3 credits, 3 hours lecture*
Integrated knowledge that students have developed in their studies of marketing, accounting, economics and organizational behaviour and other areas will be used for strategic planning of an organization. This course will include an examination of the current theory that applies in the field of business policy and group work in case analysis. This will provide students with a strategic perspective from which to make business decisions.
*Prerequisite: Completion of a minimum of 7 Business courses including BUS 110, BUS 130, BUS 239, and BUS 191*

**BUS 330**
**Advanced Financial Accounting**
*3 credits, 3 hours lecture*
This course continues with the further development of the concepts covered in the introductory and intermediate accounting courses. The objectives of financial reporting and focus on specialized areas such as accounting for business combinations, consolidations, and other forms of business formation, including partnership and joint ventures will be re-emphasized. Other topics to be studied include current value accounting, foreign currency translation and accounting for not- for-profit organizations. The knowledge portion of this course will be re-enforced through the discussion of cases covering multiple subjects.
*Prerequisite: BUS 231*

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**BUS 333**
**Management Accounting III**
*3 credits, 3 hours lecture*
Statistical concepts and skills such as regression analysis are further developed and are integrated with financial and accounting concepts to present the student with a range of statistical decision problems unique to the accounting profession. Topics may include regression and correlation analysis, linear programming, short-term decision analysis under certainty and uncertainty, as well as capital budgeting under certainty and uncertainty.
*Prerequisite: BUS 234*

**BUS 334**
**Management Accounting IV**
*3 credits, 3 hours lecture*
The complexities of and options available for, performing the management accounting control function(s), as it applies to profit-seeking private sector organizations as well as not-for- profit organizations are dealt with in this course.
*Prerequisite: BUS 333*

**BUS 336**
**Management: Processes & Problems**
*3 credits, 3 hours lecture*
This course is an overview of management accounting information for planning, control and decision-making purposes.
The following topics may be covered:
- The concept of planning; strategic planning and its implementation
- Budgeting
- Production and marketing
- Project planning and control
- Design and implementation of management control systems
- Discretionary expense centers
- Profit centers and transfer pricing
- Total performance measurement
- Management control in not-for-profit organizations

*Prerequisite: BUS 234*
*NOTE: Students requiring this course for the CMA designation may take the equivalent Athabasca University course, ADMIN404.*

**BUSM 201**
**Introduction to Canadian Business**
*3 credits, 2 hours lecture, 1.5 hours seminar*
Provides students with an introduction to the discipline and the functional areas of business. Students improve computer, presentation, leadership and group skills. Areas covered include introductions to statistics and research and selected areas from accounting, finance, information systems, marketing, operations, strategic management and others.

**CCC 001**
**Interpersonal Skills for Education and Employment I**
*5 credits, 8 hours lecture*
Students will learn how to communicate appropriately as team members with their supervisor, coworkers, teachers or peers. They will develop the skills to listen attentively, ask clear questions in a non-confrontational manner and provide useful feedback. Team building exercises will be used to demonstrate the basics of conflict management in a multicultural class or workplace setting and how to disagree in a positive manner. Students will learn to negotiate with peers and those in authority to resolve arguments. Assertiveness training, anger management and self-esteem building will be included. Information about support resources for students and their families will be provided in conjunction with community agencies.

**CCC 002**
**Goal Setting**
*4 credits, 6 hours lecture*
This course introduces students to the process of short and long-term goal setting, including what are the characteristics of a realistic plan and identifying roadblocks to successful planning.

**CCC 003**
**Academic Skill Development**
*4 credits, 6 hours lecture*
This course is designed to cover the writing, computer, math, and reading skills needed in the individual work placement. Individualized academic remediation with Computer Assisted Instruction and tutor support is available. Students will develop independent study and research skills. This course will teach students how to manage their time, use SQ3R techniques, take different sorts of tests, control test anxiety, make notes and access library resources. Learners will also learn how to set priorities, do simple time studies analysis, as well as develop and use day plans or lists.

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**CCC 004**
**Problem Solving and Critical Thinking**
*2 credits, 2 hours lecture*
Students will learn what it takes to be a critical thinker. They will practice procedures for evaluating and handling problems at school and work. Topics covered will include: knowing your attitudes, values, and mental habits, how to recognize errors in thinking, how to evaluate ideas and how to apply critical thinking. The skills and knowledge covered in this course build on those introduced in CCC 002 – Goal Setting.
*Prerequisite: CCC 002 or permission from the Program Chair*

**CCC 005**
**Interpersonal Skills for Education and Employment II**
*5 credits, 8 hours lecture*
This course will help students understand the impact of personal hygiene, work appropriate clothing, demeanor, vocabulary choice, speech patterns, body language and manners in securing and retaining employment or succeeding in formal education. Students will explore how employee behaviour impacts a business' success. They will learn how to develop a networking plan, use available on-line and print resources effectively, prepare resumes, present themselves honestly and positively to employers, develop an interview plan, complete applications and practice interview skills.
*Prerequisite: CCC 001 or permission from the Program Chair*

**CCC 006**
**Employment Safety, Rights and Responsibilities**
*5 credits, 6 hours lecture*
Students will examine the leading causes of workplace injury and generic procedures for accident reporting. They will be given skills to better identify potential workplace hazards, healthy lifestyles, appreciate near miss analysis in safety reporting and value the importance of PPE (Personal Protective Equipment) on the job. Learners will have the opportunity to earn First Aid, CPR, WHMIS, CSTS and Class 5 drivers' license certification. In addition, they will learn the rights and legal responsibilities of the employee and employer in the Alberta marketplace. Material will include discussion of rates of pay, work hours, hiring and dismissal procedures, sexual harassment, discrimination, theft, misuse of business property and liability.

**CCC 007**
**Supported Work Placement**
*5 credits, 8 hours practicum*
Students will participate in an equivalent 2-month, part-time work placement, which will be integrated with ongoing in- class training. The schedule and duties of this work placement will be determined in consultation with the student, employer and instructional team. Input will be requested from referral agencies. Students will receive information about community employment-related resources.

**CHEM 025**
**Chemistry 025**
*6 credits, 6 hours lecture*
Chemistry 025 begins with an introduction to elements and the Periodic Table, followed by atomic theory and periodicity, chemical bonding and types of compounds, chemical nomenclature and chemical reactions. The remainder of the course focuses on calculations involving measurements in chemistry, the metric systems (SI), and scientific notation as applied to gases, solutions (including acids and bases) and stoichiometry
*Alberta Education Course Equivalency: Chemistry 10 and Chemistry 20*
*Co-requisite: MATH 010C or permission from the Program Chair*

**CHEM 030**
**Chemistry 030**
*5 credits, 6 hours lecture, 2 hours lab on alternate weeks*
Chemistry 030 begins with a review of Chemistry 025, followed by a study of enthalpy changes and calorimetry, equilibrium Bronsted-Lowry acid-base theory and acid-base titrations: oxidation-reduction reactions and electrochemical cells and organic chemistry, including organic reactions and nomenclature of hydrocarbons, aromatics and other functional groups
*Alberta Education Course Equivalency: Chemistry 30*
*Prerequisite: CHEM 025 or equivalent or permission from the Program Chair*

**CHEM 101**
**Introductory University Chemistry I**
*3 credits, 4 hours lecture, 3 hours lab*
Atoms and molecules, states of matter, chemistry of the elements, relevance and uses of elements and compounds.
*Prerequisite: Chemistry 30 or equivalent*

**CHEM 102**
**Introductory University Chemistry II**
*3 credits, 4 hours lecture, 3 hours lab*
Rates of reactions, thermodynamics and equilibrium, electrochemistry and modern applications of chemistry.
*Prerequisite: CHEM 101*

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**CHEM 103**
**Introductory University Chemistry I**
*3 credits, 4 hours lecture, 3 hours lab every second week*
4.3 Engineering units for the University of Alberta
Atoms and molecules, states of matter, chemistry of the elements, relevance and uses of elements and compounds.
*Prerequisite: Chemistry 30 or equivalent*
*NOTE: Chemistry 103 is restricted to Engineering students only*

**CHEM 105**
**Introductory University Chemistry II**
*3 credits, 4 hours lecture, 3 hours lab every second week*
3.8 Engineering units for the University of Alberta
Rates of reactions, thermodynamics and equilibrium, electrochemistry and modern applications of chemistry.
*Prerequisite: CHEM 103*
*NOTE: Chemistry 105 is restricted to Engineering students only*

**CHEM 164**
**Organic Chemistry I**
*3 credits, 3 hours lecture, 3 hours lab*
Chemistry 164 introduces the relationships between molecular structure, chemical bonding and the properties and reactivity of organic compounds. The nomenclature and stereochemistry of carbon compounds are introduced. The chemistry of functional groups, primary alkanes, alkenes and alkynes, alkyl halides, alcohols and some aromatic compounds is studied through characteristic reactions and reaction mechanisms, especially nucleophilic substitutions, elimination reactions and additions to double bonds.
*Prerequisite: Chemistry 30 or equivalent. Restricted to students with CHEM 30 averages of 90% or higher, unless accepted with permission of the Program Chair.*
*NOTES: 1. This course is designed for students in programs such as Pharmacy which require a full year of organic chemistry to be completed in first year. 2. Students who already have credit for CHEM 101 should register in CHEM 261*

**CHEM 261**
**Organic Chemistry I**
*3 credits, 3 hours lecture, 3 hours lab*
Organic Chemistry I introduces the correlation of structure and chemical bonding in carbon compounds with the physical properties and chemical reactivity of organic molecules. With discussion based on selected functional groups, the course will introduce stereochemistry, three dimensional structure and reaction mechanisms, especially the mechanisms of addition to double bonds, nucleophilic substitution and elimination reactions. Functional groups covered will emphasize hydrocarbons and derivatives that contain halogens, oxygen, sulphur and the hydroxy group.
*Prerequisite: Chemistry 101 or 103*
*NOTE: Students who have credit for CHEM 161 cannot take CHEM 261 for credit. Engineering students who take this course will receive *4.5.*

**CHEM 263**
**Organic Chemistry II**
*3 credits, 3 hours lecture, 3 hours lab*
Chemistry 263 continues the study of molecular structure and reactivity of organic compounds with oxygen containing functional groups, aromatic compounds, amines and molecules of biological importance. The use of organic spectroscopy in the determination of molecular structure is introduced.
*Prerequisite: CHEM 161 or CHEM 164 or CHEM 261*

**CLASS 110**
**The Ancient World**
*3 credits, 3 hours lecture*
This course will survey the history of multiple ancient civilizations. While the primary focus will be on ancient history, the course will introduce to students the study of classics through written records and archaeology.

**COKER 101**
**Delayed Coking**
*1 credit*
Importance of the relationship of operating parameters to the efficiency of the cracking process (temperature, pressure, flow, levels, feed composition, etc).

**COKER 102**
**Process Flow**
*1 credit*
Review process flow diagrams and P & ID's of a typical delayed coking system. Review process operation parameters and procedures. Operate a delayed coking simulator to troubleshoot, recognize and respond to process upsets in the system.

**COKER 103**
**Decoking**
*1 credit*
Typical decoking cycles, drum decoking methods, procedures and hazards. Coke handling equipment. Furnace tube decoking methods, procedures and precautions.

**COKER 104**
**Pumps & Compressors**
*2 credits*
Basic pump types and operation, basic compressor types and operation. High, medium and low pressure steam systems and their purpose in delayed coking systems.

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**COKER 105**
**Instrumentation**
*2 credits*
Fundamental instrumentation simulator and hands on operation of auxiliary equipment in the process lab setting.

**COKER 106**
**Safety Training**
*2 credits*
Safety training - H2S Alive, Fire Extinguisher Training, CSTS, WHMIS, First Aid.

**COKER 107**
**Basic Computer Skills**
*1 credit*
Basic computer training in Word and Excel. Completing and filling out forms on the computer.

**COKER 108**
**Work Practicum**
*5 credits*
216 hours in the Coker unit at Suncor – 3 cycles – 6 on/6 off (3 days 3 nights)

**COM 005**
**Communication Skills**
*2 credits, 2 hours lecture*
Communication skills for everyday living at home, at school and on the job. Students will learn about and practice:
- attending behaviours
- being a good listener
- expressing themselves effectively
- assertiveness skills
- making a positive impression on others

**COMM 103**
**Interpersonal Communication for the Helping Professions**
*3 credits, 45 hours lecture*
This course is an introduction to communication skills (verbal, nonverbal, and written) for those preparing to work in the helping professions. As it is important to recognize the difference between clients, co-workers and supervisors for successful communication, a basic overview of communication styles and methods as well as basic management types and organizational behavior is included in this course. This course emphasizes the contribution of communication skills to the development of the caring relationship between the helping professional and clients. Students will explore various concepts and principles of therapeutic communication and will consider the implications for professional practice.
*Prerequisites: ANPH 100, ANPH 101*

**COMP 005**
**Computers**
*2 credits, 2 hours lab*
This is an introductory computer course designed for anyone who has never used a computer before. It will teach participants the parts of the computer a typical user needs to know: how to turn on and off a computer, how to open, save and exit from Word in a Windows 2000 operating environment and how to do basic word processing. It will also strengthen keyboarding skills.

**COMP 010**
**Computer Literacy 010**
*5 credits, 5 hours lecture*
This course is an introduction to microcomputers and basic software applications such as Word 2000 and Excel 2000. This course may be used to fulfill the science requirement of the High School Equivalency certificate.
*Alberta Education Course Equivalency: Computer Literacy 10*
*Co-requisites: AFM 009 and AFL 009 or permission from the Program Chair*

**COMSC 101**
**Introduction to Computing**
*3 credits, 3 hours lecture, 3 hours lab*
This course provides an overview of computing science concepts for students with little or no programming background. Topics include representation of data, machine architecture, operating system concepts, properties of algorithms and computational problems, syntax of a high- level procedural programming language; basic data types and control structures. Students do introductory programming for a portion of the course and HTML and web page creation.

**COMSC 174**
**Introduction to Computing I**
*3 credits, 3 hours lecture, 3 hours lab*
COMSC 174 introduces algorithmic problem solving, the foundation of computer programming, through a problem-based hands-on approach. Emphasis will be on algorithm design more than on a detailed study of a programming language, though an accessible programming language such as Python will be chosen to provide a practical platform for explorations. The fundamental building blocks of the algorithm will be discussed: control flow, data structures, recursion, modularization and testing. Programming exercises will be selected from application areas relevant to the program of study of enrolled students.

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**COMSC 175**
**Introduction to Computing II**
*3 credits, 3 hours lecture, 3 hours lab*
COMSC 175 continues the study of algorithmic problem solving undertaken in COMSC 174. Emphasis will be on higher-level concepts such as functional design and object-oriented programming. Human interface design and construction will also be discussed. Programming exercises will be selected from application areas relevant to the program of study of enrolled students.
*Prerequisite: COMSC 174*

**COMSC 272**
**Introduction to Formal Language and Discrete Structures**
*3 credits, 3 hours lecture, 1 hour lab*
This course is an introduction to formal languages and discrete structures for computing science students. Topics include: sets and functions, prepositional calculus, formal proofs, Boolean algebra and applications to logic circuits, first order predicate calculus, induction and recursion, relations, equivalence relations, partial orders, directed and undirected graphs and application to relational database design.
*Prerequisite: COMSC 174*
*Co-requisite: COMSC 175*

**CREE 100**
**Introductory Cree**
*6 credits, 4 hours lecture, 1 hour lab*
Introductory Cree is a general introduction to Plains Cree (Y dialect) grammar and vocabulary with an emphasis in the practice in speaking and working in the language laboratory. No prior knowledge in Cree is assumed.

**CTS 001**
**Career Technology Studies - Energy and Mines**
*5 credits, 4 hours lecture, 4 hours lab*
This course is composed of several modules designed to promote among learners an awareness of the variety of careers they might pursue within the oil sands industry. Beginning with an overview of geology and a discussion of the issues surrounding the use of non-renewable resources, this course focuses on providing an overview of the attitudes and competencies required in this industry, as well as the highlights of oil sands mining and synthetic crude oil production. A career transition package of practical skills completes the course.
*Prerequisite: Grade 9 program of studies or the equivalent*

**CTS 002**
**Career Technology Studies - Environmental Issues in the Oil Sands Industry**
*5 credits, 6 hours lecture*
This course provides practical activities that raise an awareness of the concept of responsible stewardship with respect to how industry, particularly the oil sands industry, tailors its decision-making processes to do no harm to the ecological balance of the environment in which it operates. The learner will engage in discussions and projects designed to examine present impacts of industry on the environment as well as steps being taken to control these impacts. This course concludes with an examination of the effects of emerging technologies that will be used in future projects in order to understand and minimize environmental effects of these technologies.
*Prerequisite: Grade 9 program of studies or the equivalent*

**DANCE 110**
**Introduction to Modern I**
*3 credits, 4 hours lab*
Beginner study of the techniques of modern dance. This technique class concentrates on a multi-disciplinary approach to contemporary dance training, beginning with thorough extensive stretching and strengthening exercises. Attention will be paid to proper posture and alignment, spatial awareness and presentation. Students will develop a beginner level of Modern vocabulary and skills. Final evaluation will include performance of instructor's choreography.

**DANCE 111**
**Introduction to Modern II**
*3 credits, 4 hours lab*
Further beginner study of the techniques of modern dance. This technique class further concentrates on a multi-disciplinary approach to contemporary dance training, including thorough extensive stretching and strengthening exercises. Continuing attention will be paid to proper posture and alignment, spatial awareness, presentation, as well as flexibility, dance quality and focus. Students will develop an increasing level of Modern vocabulary and skills. Final evaluation will include performance of instructor's choreography.

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**DANCE 200**
**The Spectrum of Dance in Society**
*3 credits, 1 hour lecture, 2 hours labs*
The theory and practice of dance as a human physical activity. Focus will be on the aesthetic, expressive, rhythmical dimensions of movement in a culture's artistic and social life. The study will include movement content, techniques, improvisation, composition and performance in a variety of dance forms including modern/creative, social, jazz, and folk dance.

**DANCE 210**
**Modern I**
*3 credits, 4 hours lab*
Intermediate study of the techniques of modern dance. This technique class concentrates on a multi-disciplinary approach to contemporary dance training, beginning with thorough extensive stretching and strengthening exercises. Attention will be paid to proper posture and alignment, spatial awareness, flexibility, presentation, improvisation, dance quality and focus. Students will develop an intermediate level of Modern vocabulary and skills. Final evaluation will include a group choreography presentation.
*Prerequisite: Successful audition*

**DANCE 211**
**Modern II**
*3 credits, 4 hours lab*
This techniques class further concentrates on a multi-disciplinary approach to contemporary dance training, beginning with thorough extensive stretching and strengthening exercises. Continuing attention will be paid to proper posture and alignment, spatial awareness, flexibility, presentation, improvisation, dance quality and focus. Students will develop an increasing intermediate level of Modern vocabulary and skills. Final evaluation will include presentation of solo choreography.
*Prerequisite: DANCE 210 or successful audition*

**DRAMA 101**
**Introduction to Theatre Art**
*3 credits, 3 hours lecture*
A study of the elements of theatre and the process of theatrical production in today's theatre. Issues covered include: the origins and development of theatre, the nature and function of theatre, the relationship of theatre to other forms of art and the exploration of the varieties of theatrical experience. This course requires no previous theatrical experience.

**DRAMA 102**
**Play Analysis**
*3 credits, 3 hours lecture*
Understanding the nature and elements of drama through the critical analysis of plays and the consideration of creative solutions in their production.

**DRAMA 103**
**Critical Analysis of Playtexts**
*3 credits, 3 hours lecture*
Analysis of playtexts in reference to the specific challenges faced by actors, directors, designers and dramaturges.
*NOTE: Not to be taken by students with credit in Drama 102*

**DRAMA 150**
**Introduction to Acting I**
*3 credits, 6 hours lecture*
Development of the self as the fundamental instrument of the actor; emphasis on imaginative development through improvisation and creative interpretations of text. As an introduction to dramatic form, dramatic improvisation is used.

**DRAMA 151**
**Introduction to Acting II**
*3 credits, 6 hours lecture*
The study of acting including the analysis and enactment of scripted scenes and characterization. Introduction to characterization and script work.
*Prerequisite: DRAMA 150*

**DRAMA 250**
**Advanced Acting I**
*3 credits, 6 hours lecture*
Exploration of complex dramatic texts with an emphasis on characterization
*Prerequisite: DRAMA 151*

**DRAMA 251**
**Advanced Acting II**
*3 credits, 6 hours lecture*
Study of, and practice in, rehearsal and performance of roles or technical production duties. This course will involve preparation and presentation of assigned role(s) in, or technical support of the VPA/Keyano Theatre's season of plays.
*Prerequisite: DRAMA 250*

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**EA 100**
**Role of the Educational Assistant**
*3 credits, 45 hours*
This course focuses on the skills and attitudes essential for paraprofessionals to provide meaningful support to students and teachers in educational environments. The emphasis will be on: development of a personal philosophy of education, understanding of school and board educational philosophies and practices, professional ethics and responsibilities, the teacher/ educational assistant team, the educational assistant's role within a multidisciplinary team and development of skills to achieve the flexibility necessary for the changing roles of the educational assistant.

**EA 101**
**Child Development I**
*3 credits, 45 hours*
The growth and development of the child from the prenatal period through twelve years of age is studied. Physical, emotional and language development will be examined through readings, discussion, projects with children and observing and recording children's behaviour. Students will begin to develop perspective on the history and the research and theory of child development.

**EA 102**
**Language and Literacy**
*3 credits, 45 hours*
The focus of this course is the patterns of development in language and literacy for children aged 0-8. It also lays the foundation for understanding the developmental base of language/literacy delays apparent in older children. Strategies to support children's development in both language and literacy are examined and practiced. One emphasis will be on the creative use of developmentally appropriate quality literature to establish a language-rich environment.
*Prerequisite: EA 101 or ELCC 101*

**EA 104**
**Guiding Children's Behaviour**
*3 credits, 45 hours*
Understanding children's behaviour and the child-centered problem-solving philosophy is the focus of this course. Students learn and practice communication skills with children, including passive and active listening, affirmations, positive communication of guidelines, negotiation and facilitation of children's problem solving. Guidance strategies are examined for developmental appropriateness and applied to both support and modify children's behaviour. Students will also examine how to respect diverse family values and partner with parents when addressing typical and challenging behaviour.

**EA 105**
**Personal Development & Interaction**
*2 credits, 30 hours*
The emphasis in this course will be on the growth of each individual in relation to others. Students will set goals for personal growth by identifying personal values, needs, roles, biases, strengths and weaknesses. Students will demonstrate self-awareness and increased effectiveness in relationships by practicing appropriate self-disclosure, giving and receiving feedback and expressive and receptive communication skills. They will identify and assess whether their personal qualities match with the qualities necessary for a childhood professional.

**EA 110**
**Practicum I**
*3 credits, 120 hours practicum*
Students have an opportunity to put theory into practice by working with children in community settings including kindergarten and primary grade classes. Students must provide their own transportation to assigned practicum, keep a time sheet and a daily record of progression in the practicum booklet. Practicum may be repeated or extended when deemed necessary by the Childhood Studies department.
*Prerequisite or Co-requisite: 3 certificate courses including EA 104*
*Co-requisite: EA 125*

**EA 116**
**Health & Safety Issues**
*1 credit, 15 hours*
This course emphasizes the importance of optimal health and safety practices for children and the staff who work with them. One aspect of this course will be the ability to recognize and respond appropriately to many common health issues within inclusive programs.

**EA 125**
**Practicum Seminar I**
*1 credit, 15 hours*
This course provides a forum to support and debrief practicum experiences and explore the integration of theory with practice. The responsibilities and ethical behaviour of childhood professionals will be discussed. Students will be introduced to resource files as a method of organizing professional information and curriculum ideas.
*Prerequisite or Co-requisite: 3 first year courses*
*Co-requisite: EA 110*

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**EA 201**
**Child Development II**
*3 credits, 45 hours*
The growth and development of the child from infancy through twelve years of age is examined, with the emphasis on social, cognitive and moral development. Keeping portfolio records of children's development and reflecting on case studies will facilitate the application of child development theory to practice.
*Prerequisite: EA 101*

**EA 202**
**Working with Children with Special Needs**
*3 credits, 45 hours*
This course is designed as a practical overview course so that students may gain or increase their knowledge of the current issues in the field of special needs. Students will have the opportunity to develop an in-depth knowledge of strategies and interventions in the field of special education. We will explore the philosophy and educational concepts associated with inclusion of children with exceptionalities into regular preschool, elementary, junior and senior high school settings.
*Prerequisite or Co-requisite: EA 101 or ELCC certificate or permission of the Program Chair*

**EA 206**
**Developing Numeracy in the Elementary Classroom**
*2 credits, 30 hours*
Children's developing math concepts and abilities at the pre- math and early math levels will be studied and observed. The emphasis will be the educational assistant's role in observing children's responses to math lessons and supporting and adapting learning experiences to meet individual learning goals. Awareness of approaches and strategies to remediate math learning will be examined. Access to groups of children is necessary to fulfill the requirements of the course.

**EA 210**
**Practicum II**
*4 credits, 150 hours practicum*
This course allows the students to build on skills learned in Practicum I and to demonstrate increasingly complex communication, guidance and problem solving skills with children. Placements for this practicum will be with mentor teacher/educational assistant teams in middle and upper elementary grades or older.
*Prerequisites: EA 110 and EA 125 and 10 certificate courses*
*Co-requisite: EA 225*

**EA 211**
**Reading Support for Emergent Readers**
*3 credits, 45 hours*
Students will gain an understanding in supporting children's literacy development in the areas of auditory processing, language processing, sight vocabulary, reading practice and writing development. Practical strategies for working with a variety of reading remediation programs will also be explored. Access to groups of children is necessary to fulfill the requirements of the course.
*Prerequisite: EA 102*

**EA 212**
**Exceptionality 1: Brain/Cognitive**
*1 credit, 15 hours*
This course will include topics on exceptionalities such as: Fetal Alcohol Syndrome or Effects (FAS/FAE), Attention Deficit and Hyperactivity Disorder (ADHD), Auditory Processing Deficit (APD), developmental delays and learning disabilities. Knowledge of the exceptionality as well as strategies for working with children diagnosed with the condition will be included.
*Prerequisite: EA 202 or ELCC 301*

**EA 213**
**Exceptionality II: Physical/Medical**
*1 credit, 15 hours*
Included in this course will be information on sensory impairments (hearing/vision), autism, Tourette syndrome, cerebral palsy, asthma, allergies and seizure disorders. Knowledge of the exceptionality as well as strategies for working with children diagnosed with the condition will be included.
*Prerequisite: EA 202 or ELCC 301*

**EA 214**
**Introduction to Communication Disorders**
*1 credit, 15 hours*
Working one-to-one with children to improve their oral expressive skills and articulation is a frequent job requirement for educational assistants. Implementing programs prescribed by speech-language, pathologists requires a deep knowledge of language and speech development. Issues and techniques involved in teaching children with communication disorders will be examined.
*Prerequisites: EA 102 or ELCC 102 and EA 202 or ELCC 301*

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**EA 216**
**Exceptionality V: Behavioural Disorders**
*1 credit, 15 hours*
A variety of basic teaching techniques and strategies for work with children with behaviour disorders will be explored.
*Prerequisites: EA 104 or ELCC 104 and EA 202 or ELCC 301*

**EA 217**
**Adolescents in the Classroom**
*1 credit, 15 hours*
This course will enable the student to develop a greater knowledge of the unique needs of adolescents by examining adolescent development. It will provide the educational assistant with a repertoire of strategies and interventions to effectively support adolescents and their junior/senior high teachers. The goal will be to meet the academic, social and behavioural needs of the adolescent.
*Prerequisite: EA 202 or ELCC 301*

**EA 222**
**Specialized Training in Exceptionalities**
*1 credit, 15 hours seminar*
This course enables students to develop the skills and understanding required to assist children with specific special education needs. The focus of the course will vary from term to term depending on community need. Students may apply for prior learning or advanced credit for previous relevant training after consultation with the department chair.

EA 223
**Working with EAL Children**
*1 credit, 15 hours seminar*
This course will enable the student to develop greater knowledge of the unique needs of EAL children. It will provide the educational assistant with ideas and strategies about how to assist EAL children with speaking, reading, writing English, as well as, activities for listening to English in a meaningful way.

**EA 224**
**Working with Children with Autism Spectrum Disorders**
*1 credit, 15 hours seminar*
This course will enable the student to develop the understanding and skills required to effectively support children with Autism Spectrum Disorders (ADS). It emphasizes best practices in social skills development, behaviour management, sensory integration therapy and communication systems for assisting children with ASD in inclusive programs.
*Prerequisite: EA 202 or ELCC 301*

**EA 225**
**Practicum Seminar II**
*1 credit, 15 hours*
This course provides a weekly forum to support and debrief practicum experiences and explore the integration of theory with practice. Students will practice applying knowledge of the role of the educational assistant and guidance skills to real-life situations.
*Prerequisites: EA 110 and EA 125*
*Co-requisite: EA 210*

**EA 226**
**School Aged Care**
*1 credit, 15 hours*
This course will provide a brief overview of developmentally appropriate programs for children aged five to twelve outside of their formal school days. We will examine developmental milestones of school-age children, the roles their caregivers play to support their development, optimum school-age care environments, building community and developmentally appropriate curriculum in school-age care settings.

**EA 227**
**Learning Through Play for School Aged Children**
*1 credit, 15 hours*
This course introduces the nature value and development of play in the lives of school-aged children. We will examine how the adult becomes involved in and supports children's play in school classrooms, on the playground and in out-of-school care programs. Practice will be gained observing, supporting and extending play and learning. Documentation of school-aged play and learning will be practiced. Regardless of their previous formal experience with a learning through play philosophy, students will experience new and innovative ways of understanding play in children's lives.

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**EA 314**
**Working with Communication Disorders**
*1 credit, 15 hours*
Working one-on-one with children to improve their communication skills is a frequent job requirement for Educational Assistants. Educational Assistants are required to understand a variety of treatment approaches for various communication disorders to appropriately implement programs developed by a Speech-Language Pathologist. Issues and techniques involved in teaching children with communication disorders will be discussed.
*Prerequisite: EA 214*

**EAS 100**
**Planet Earth**
*3 credits, 3 hours lecture, 3 hours lab*
Introduction to the origin and evolution of the Earth and the solar system. Introduction to plate tectonics and the rock cycle. Simple energy balances and interactions between radiation and the atmosphere, land, oceans, ice masses and the global hydrological cycle. Evolution of life, biogeography and global climate in the context of geologic time. The carbon cycle. Human interaction with the Earth. Mineral and energy resources.

**EAS 105**
**The Dynamic Earth Through Time**
*3 credits, 3 hours lecture, 3 hours lab*
The plate tectonic framework of a dynamic Earth as it relates to the origin of major groups of minerals and rocks. Earthquakes, structural geology and the origin of mountain belts. Surface processes and their sedimentary products. History of life and extinctions.
*Prerequisite: EAS 100 or 102*
*NOTE: Not available to students with credit in EAS 101*

**EAS 208**
**Introduction to Global Change**
*3 credits, 3 hours lecture*
To study the natural and anthropogenic causes of global scale environmental change: the role of the atmosphere, oceans, biosphere and cryosphere in the process of environmental change; relationships between levels of technology and development, and the character of environmental change associated with human activity.
*Prerequisite: Any 100-level Science course*

**ECON 101**
**Introduction to Micro-Economics**
*3 credits, 3 hours lecture*
Analysis of economic problems, analysis of the market economy with emphasis on the Canadian economic system, the role of the consumer, private industry and government in competitive and monopolistic markets, collective bargaining and determination of wages.

**ECON 102**
**Introduction to Macro-Economics**
*3 credits, 3 hours lecture*
This course provides a basic understanding of the macro economy with emphasis on Canadian problems and policies. The topics are national income theory, monetary theory, and fiscal policies and international trade theory.
*Prerequisite: ECON 101 or permission of the Program Chair*

**ECON 341**
**Money and Banking**
*3 credits, 3 hours lecture*
This course will primarily focus on the supply of money and elementary issues of monetary control. Topics will include the analysis of money and credit in the exchange process, financial intermediaries, commercial banking and central banking.
*Prerequisite: ECON 101 and ECON 102*

**EDPRA 250**
**Orientation to Teaching**
*3 credits, 3 hours lecture, 60 hours practicum*
This course is made up of two different but integrated components. The course content focuses on the various roles teachers have to perform while the practicum portion gives students the opportunity to observe and participate in the life of classrooms and work in a limited way with students at different levels. This course will include 60 hours of practicum.
*NOTE: The grading system for this course is Pass/Fail EDPY 302 (pending approval)*

**EDPY 302**
**Learning and Development in Childhood**
This is an introductory--level course in human development and learning. This course is directed towards students who expect to work with children (ages 0--12). It is designed to provide students with the opportunity to study childhood development and learning with a particular focus on the application of theory to educational practice. In this course students will gain an understanding of how children from a diversity of backgrounds develop and learn and how teachers can provide appropriate learning opportunities that support students' educational, physical, cognitive, social, cultural, moral, and psychological development.
*Prerequisite: EDU 100 or approval of the chair*
*NOTE: Credit cannot be received for both EDPY 302 and EDFX 200 or PSYC 223*

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**EDU 100**
**Contexts of Education**
*3 credits, 3 hours lecture*
This course provides an introduction to education with an emphasis on exploring what it means to be a teacher in contemporary society. Education will be explored in different contexts and from the following perspectives: historical, sociological, philosophical, Indigenous, political, and ethical. While the main focus of this course is teaching in Alberta K-12 schools, comparisons will also be made with education in other contexts. This course focuses on the different contexts of professional practice with education. It critically examines the complex social relationships among educators as professionals and learners as participants in educational institutions.
*NOTE: Credit cannot be received for both EDU 100 and EDFX 200 or equivalent*

**EDU 210**
**Introduction of Educational Technology**
*3 credits, 3 hour lectures, 3 hours lab*
This course examines frameworks, trends, issues, and futuristic scenarios on the role of technology in education. Students will gain hands-on experience in using technology, with a special emphasis on strategies for integrating technology into the school curriculum. Students may not receive credit for both EDU 210 and EDIT 202.
*Prerequisite: EDU 100*

**ELCC 101**
**Child Development I**
*3 credits, 45 hours*
The growth and development of the child from the prenatal period through eight years of age is studied. Physical, emotional, and language development will be examined through readings, discussion, projects with children, and observing and recording children's behaviour. Students will begin to develop perspective on the history, and the research and theory of child development.

**ELCC 102**
**Language and Literacy in Early Childhood**
*3 credits, 45 hours*
The focus of this course is the patterns of development in language and literacy for children aged 0-8. It also lays the foundation for understanding the developmental base of language/literacy delays apparent in older children. Strategies to support children's development in both language and literacy are examined and practiced. One emphasis will be on the creative use of developmentally appropriate quality literature to establish a language-rich environment.
*Prerequisite: ELCC 101 or EA 101*

**ELCC 104**
**Guiding Children's Behaviour**
*3 credits, 45 hours*
Understanding the child-centered problem-solving philosophy is the focus of this course. Students learn and practice communication skills with children, including passive and active listening, affirmations, positive communication of guidelines, negotiation and facilitation of children's problem solving. Guidance strategies are examined for developmental appropriateness, and applied to both support and modify children's behaviour. Students will also examine how to respect diverse family values and partner with parents when addressing typical and challenging behaviour.

**ELCC 105**
**Personal Development and Interaction**
*2 credits, 30 hours*
The emphasis in this course will be on the growth of each individual in relation to others. Students will set goals for personal growth by identifying personal values, needs, roles, biases, strengths, and weaknesses. Students will demonstrate self-awareness and increased effectiveness in relationships by practicing appropriate self-disclosure, giving and receiving feedback, and expressive and receptive communication skills. They will identify and assess whether their personal qualities match with the professional qualities necessary for the early childhood profession.

**ELCC 106**
**Learning Through Play**
*3 credits, 45 hours*
This course introduces the student to the nature, value, and development of play in the lives of children. How adults become involved in and provide for children's play is emphasized. Students will gain experience observing, supporting, and extending play and learning. Access to groups of young children is necessary to fulfill the course requirements.

**ELCC 110**
**Practicum I**
*4 credits, 165 hours practicum*
Students have an opportunity to put theory into practice by working with children in the Keyano preschool and community settings including daycare, preschool and kindergarten classes. Students must provide their own transportation to assigned Practicum, keep time sheets, and a daily record of progression in the Practicum booklet. Practicum may be repeated or extended when deemed necessary by the ELCC department.
*Prerequisite or Co-requisite: ELCC 125 and 3 first year courses including ELCC 104*

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**ELCC 116**
**Nutrition, Health & Safety**
*2 credits, 30 hours*
This course emphasizes the importance of optimal nutrition, health and safety practices for young children and the staff who work with them in early childhood settings. Alberta's child abuse protocol will be covered.

**ELCC 123**
**Creative Experiences for Young Children**
*3 credits, 45 hours*
Understanding and appreciation of children's creativity and creative expression will be gained through observing children, and studying the developmental patterns in art, music, and movement. Students will learn how to select, adapt, create, and implement resources in developmentally appropriate ways. Students will be challenged to further their own comfort and skills in both supporting and extending children's creative expression.

**ELCC 125**
**Practicum Seminar I**
*1 credit, 15 hours*
This course provides a weekly forum to support and debrief practicum experiences and explore the integration of theory with practice. The types of early childhood programs, the legislation governing those programs and the responsibilities and ethical behaviour of early childhood professionals will be discussed. Students will be introduced to resource files as a method of organizing professional information and curriculum ideas.
*Co-requisite: ELCC 110*

**ELCC 201**
**Child Development II**
*3 credits, 45 hours*
The growth and development of the child from infancy through eight years of age is examined, with the emphasis on social, cognitive, and moral development. Keeping portfolio records of children's development and reflecting on case studies will facilitate the application of child development theory to practice.
*Prerequisite: ELCC 101*

**ELCC 206**
**Planning for Play**
*3 credits, 45 hours*
Implementing a child-centered play-based program is the focus of this course. Students will learn and practice using observations of children's play interests and abilities as a basis for planning. Methods of extending play and learning will be examined, including developmentally appropriate group experiences such as whole group time, field trips, and community guests. An understanding of the math and science learning that children demonstrate in their play and how to plan curriculum to enhance this learning will be covered. Access to groups of young children is necessary to fulfill the planning requirements of the course.
*Prerequisite: ELCC 106*

**ELCC 210**
**Practicum II**
*5 credits, 210 hours practicum*
This course allows the students to build on skills learned in Practicum I and to demonstrate increasingly complex communication, guidance and problem solving skills with children. The student will demonstrate good planning and implementation of a developmentally appropriate program.
*Prerequisite: ELCC 110 and ELCC 125*
*Co-requisite: ELCC 225 and 6 certificate courses*

**ELCC 225**
**Practicum Seminar II**
*1 credit, 15 hours*
This course provides a weekly forum to support and debrief practicum experiences and explore the integration of theory with practice. The Early Childhood Environment Rating Scale (ECERS), used by the Alberta Day Care Office to assess program quality, will be examined.
*Prerequisite: ELCC 110 and ELCC 125*
*Co-requisite: ELCC 210*

**ELCC 300**
**Foundations: Issues and Ethics**
*2 credits, 30 hours*
An exploration of the issues and ethical problems that face caregivers in the field of Early Childhood with reference to historical and philosophical influences. Skills for responsible action in resolving ethical dilemmas will be studied. Formulation of a personal philosophy of working with young children is also a focus of this course.
*Prerequisite: ELCC Certificate or permission of the Program Chair*

**ELCC 301**
**Exceptional Child**
*3 credits, 45 hours*
This practical course is designed so that students may increase their knowledge of the current issues in the field of special needs. We will explore strategies that are currently in practice for the integration of children with exceptionalities into regular preschool and primary settings.
*Prerequisite: ELCC Certificate or permission of the Program Chair*

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**ELCC 302**
**Environments**
*2 credits, 30 hours*
An examination of the power of the environment in influencing children's behaviour and learning. Students will explore ways of using space and materials creatively in their own centres, to make children's individual and group play experiences developmentally appropriate. The impact of environment on the programming of learning experiences, with reference to Bredekamp's Developmentally Appropriate Practices, will be a key issue. Students must demonstrate the principles of the course in the settings they provide for children.
*Prerequisite: ELCC Certificate or permission of the Program Chair*

**ELCC 303**
**Child and Family**
*2 credits, 30 hours*
This course is designed to increase the students' understanding of family dynamics and family diversity. The challenges to, and supports for, family participation in early childhood programs are examined. A collaborative approach to family-staff communication and involvement will be applied to each student's unique work situation.
*Prerequisite: ELCC Certificate or permission of the Program Chair*

**ELCC 304**
**Ecology of the Family**
*2 credits, 30 hours*
This course provides an overview of the family in today's society. Focus is on the ecology of the modern family with particular reference to poverty, affluence, violence, the women's movement, the children's rights movement and the relationship of the family and world of work.
*Prerequisite: ELCC Certificate or permission of the Program Chair*

**ELCC 305**
**Interpersonal Relationships**
*2 credits, 30 hours*
The emphasis of this course is on expanding students' awareness of self and continuing to build effective communication skills, including attentive and reflective listening, giving and receiving feedback, assertiveness techniques and problem solving skills. Additional focus will be on developing skills to build and maintain relationships with others.
*Prerequisite: ELCC 105 or EA 105 or permission of the Program Chair*

**ELCC 306**
**Group & Team Dynamics**
*2 credits, 30 hours*
The emphasis of this course is twofold. The students will understand and implement the NAEYC Code of Ethical Conduct. Additionally, the students will develop their team performances and gain a stronger understanding of team concept, group and team dynamics and the various roles that exist within teams.
*Prerequisite: ELCC 105 or EA 105 or permission of the Program Chair*

**ELCC 307**
**Program Integration**
*2 credits, 30 hours*
This course is designed to enable students to increase their understanding of child-centered developmentally appropriate programming. Methods of curriculum planning and record keeping will be examined, with an emphasis on play-based emergent curriculum. Current topics and issues, related to early childhood curriculum, will be addressed. Being able to fulfill planning assignments in a program setting is required.
*Prerequisite: ELCC Certificate or permission of the Program Chair*

**ELCC 308**
**Curriculum for Diversity**
*2 credits, 30 hours*
This programming course emphasizes the importance of providing curriculum that is sensitive to the range of cultures found within our community today. Students are encouraged to recognize their own cultural biases, critically examine their program for evidence of cultural inclusion or exclusion, and develop strategies to promote cultural sensitivity. Students will be involved in an action project to implement change in practice.
*Prerequisite: ELCC certificate or permission of the Program Chair*

**ELCC 309**
**Understanding Children's Behaviour**
*2 credits, 30 hours*
Participants in this course will examine behaviours of children that practitioners find most challenging including anger and aggression, non-compliance, high sensitivity, attention problems, and bullying. Effects of the physical and interactional environment on behaviour will be studied. It is assumed that participants already demonstrate a working knowledge of developmentally appropriate responses to typical behaviours of young children in group situations.
*Prerequisite: ELCC Certificate or permission of the Program Chair*

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**ELCC 320**
**Practicum III - Part I**
*2 credits, 80 hours practicum*
This course is designed to help students translate early childhood theory into developmentally appropriate practice with children. The ability to self-reflect on one's practice through writing and discussion is emphasized.
*Prerequisite or Co-requisites: 2 second year courses*

**ELCC 321**
**Practicum III - Part II**
*3 credits, 120 hours practicum*
A continuation of Practicum III.
*Prerequisite or Co-requisite: ELCC 320 and 4 second year courses*

**ELCC 322**
**Practicum IV - Part I**
*2 credits, 80 hours practicum*
Continued enhancement in translating theory to practice with children. Individual contracts are developed to ensure the student's needs and interests are met.
*Prerequisite or Co-requisites: ELCC 321 and 6 second year courses*

**ELCC 323**
**Practicum IV - Part II**
*3 credits, 120 hours practicum*
Students will complete the final objectives of the practicum focusing on those issues which pertain to their individual practice with children.
*Prerequisite or Co-requisite: ELCC 322 and 8 second year courses*

**ELCCA 100**
**Introduction to Child Care**
*3 credits, 45 hours*
ELCCA 100 is an introduction to a child-centered approach to working with young children. A main focus is the roles and responsibilities essential to ensuring quality care for young children, including a positive approach to guiding behaviour. Provincial standards of care will be reviewed. Students will also develop understanding of the relationship between play and child development, and how to observe and facilitate learning through play.
*Prerequisite: Grade 10 or equivalent*

**EMTA 400**
**Integrated Theory**
*6 credit, 128 hours*
This course provides the theory needed for an Emergency Medical Technician. Students integrate theory in the areas of communications, legal & ethical issues, anatomy & physiology in order to prepare them for the primary care they will provide as EMTs.
*Co-requisite: EMTA 406 and EMTA 407*

**EMTA 406**
**Recreation Program – Fitness**
*1 credit, 60 hours*
This course deals with the principles of personal fitness, awareness of your present fitness level and provides guidelines for establishing a personal fitness program.
*Co-requisite: EMTA 400*

**EMTA 407**
**Practical Course**
*3 credits, 150 hours*
This course will cover the practical applications of skills required of an EMT. In this course, students will demonstrate skills in a laboratory setting. There is an additional 16 hours for the ITLS course.
*Co-requisite: EMTA 400*

**EMTA 408**
**Ambulance Practicum**
*4 credits, 240 hours*
The ambulance and hospital practicums are designed to ensure the student is capable of applying the theoretical knowledge gained over the previous few months and apply it to actual patient care. The ambulance portion of the program allows the student to experience a wide variety of medical and traumatic conditions.
*Co-requisites: EMTA 400, EMTA 406 and EMTA 407*

**EMTA 409**
**Hospital Practicum**
*1 credit, 36 hours*
Keyano College values quality education. For prehospital professions, a critical component of this quality is the clinical experience. The clinical placement allows students, under the guidance of an experienced professional, to apply the skills they have learned. This mentoring process allows the student to safely develop confidence and competence with their new skills and knowledge by both observation of skilled professionals, and application of their skills in a supervised environment.
*Co-requisites: EMTA 400, EMTA 406 and EMTA 407*

**EMTP 501**
**Anatomy and Physiology**
*3 credits, 45 hours*
This course is a study of the fundamentals of human body structure and function with emphasis on those systems of particular importance to the training of paramedics. It will build upon the previous education the students have had in this area.

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**EMTP 502**
**Pathophysiology**
*6 credits, 96 hours*
Pathophysiology is the study of the biologic basis of disease. It is a required course for diagnosis-based treatment in prehospital care.

**EMTP 503**
**Prehospital Skills**
*3 credits, 60 hours*
The Prehospital Skills course focuses on simulated learning experiences where the student relates knowledge and values of Paramedicine while practicing the common Skills of the Advanced Life Support provider. The student will demonstrate mastery of a Basic Life Support (BLS) Assessment Survey and apply new Advanced Life Support (ALS) skills to scenario situations. The student will complete independent study before practicing or demonstrating the skills in the laboratory environment.

**EMTP 504**
**Aeromedical**
*6 credits, 138 hours*
This course will familiarize the student with the special aspects of patient care associated with air transport and survival. There will be a focus placed on understanding how altitude and pressure affect human physiology, as well as, the treatment variables associated with high altitude transport.

**EMTP 505**
**Pharmacology**
*3 credits, 45 hours*
This is an introductory course that deals with the pharmacokinetics and pharmacodynamics of drugs used in pre-hospital care. It focuses on drugs used for medical conditions, a drug's class, description, mechanism of action, indications, contraindications, precautions, side effects, interactions, dosage, and dosage forms.

**EMTP 506**
**Obstetrics**
*3 credits, 45 hours*
The focus of this course will be on complications related to obstetrics.

**EMTP 507**
**Physical Examination**
*3 credits, 45 hours*
This Physical Examination Course is designed to help practitioners learn the intricate functions of the human body. It will teach the practitioner to perform physical examinations when working with patients who are in different states of physical, mental, and emotional health.

**EMTP 508**
**Advanced Pharmacology**
*3 credits, 45 hours*
The Advanced Pharmacology course and principles of Prehospital teach paramedic students advanced concepts and principles of Prehospital drug administration.

**EMTP 509**
**Intermediate Ambulance Practicum**
*6 credits, 432 hours*
The Intermediate Ambulance Course gives the student the opportunity to practice new skills in the Prehospital clinical setting. This course is the first of three practicum experiences the student will participate in, where the application of the theoretical knowledge and skills are practiced on "real" patients. This course will expose the student to a variety of patients in a variety of "uncontrolled" prehospital situations.

**EMTP 510**
**Paramedic Projects**
*3 credits, 45 hours*
The Paramedic Projects course will introduce the student to the importance of tracking personal and professional experiences and relating them to career and educational goals. The learner will also research and discuss medical legal issues, which relate to current clinical practice.

**EMTP 511**
**Emergency Diagnosis and Treatment**
*6 credits, 96 hours*
This course deals with the diagnosis and treatment of both medical and trauma emergencies at the paramedic level. This diagnosis is obtained in combination with physical exam, symptoms, history, and diagnostic tests done in the field.

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**EMTP 512**
**Hospital Practicum**
*6 credits, 445 hours*
This hospital course applies experiential learning concepts, within the controlled setting of a health care facility. Students will apply theoretical knowledge when completing research, patient assessment and competency practice assignments.

**EMTP 513**
**Advanced Life Support**
*3 credits, 64 hours*
This 3-credit course consists of value-added-courses currently recognized as Standards within the prehospital industry. The short courses taught within this course include Advanced Cardiac Life Support, Pediatric Life Support, Basic Trauma Life Support, Advanced and Neonatal Advanced Life Support.

**EMTP 514**
**Advanced Skills**
*3 credits, 45 hours*
In the Advanced Paramedic Skill course, students will focus in relating knowledge and performance to skills not often practiced by paramedics in the prehospital setting.

**EMTP 515**
**Final Ambulance Practicum**
*6 credits, 480 hours*
The Final Ambulance Course gives the student the opportunity to practice all skills of a Paramedic in the prehospital clinical setting. This course is the last of three practicum experiences the student will participate in, where the application of the theoretical knowledge and skills are practiced on "real" patients. This course will expose the student to a variety of "uncontrolled" prehospital situations, where they have an increased responsibility to provide care. The student will practice under the supervision of a clinical preceptor to ensure advanced life support (ALS) concepts are appropriately incorporated into patient care.

**ENCMP 100**
**Computer Programming for Engineers**
*3 credits, 3 hours lecture, 1.5 hours lab*
3.8 Engineering units for the University of Alberta
This course is an introduction to MATLAB with applications to engineering problems. Topics to be covered include an introduction to algorithmic problem solving, design methodologies, MATLAB language structure and syntax. Weekly laboratories offer students the opportunity to translate concepts presented in lectures into interesting application programs.
*NOTE: ENCMP 100 is restricted to Engineering students.*

**ENCS 201**
**Wildlife Biodiversity and Ecology**
*3 credits, 3 hours lecture, 3 hours lab*
Introduction to animals in the context of conservation, interactions with people and roles in natural ecosystems. Labs provide a survey of North American animal life, both vertebrate and invertebrate with emphasis on recognition of higher taxa and on hierarchical classification. Field trips required.

**ENCS 260**
**History and Fundamentals of Environmental Protection and Conservation**
*3 credits, 3 hours lecture*
This course provides students with a philosophical and sociological exploration of historical and contemporary perspectives on human-environmental relationships and their implications. Students explore these perspectives in a framework of critical thinking and through case studies.

**ENGG 102**
**Introduction to the Engineering Profession**
*2 credits, 2 hours lab*
2.0 Engineering units for the University of Alberta
This course is an introduction to the engineering profession. Students will attend seminars presented by professional engineers of various disciplines. Students may also examine: engineering disciplines; co- operative education; study skills; career fields and work opportunities; history and development of the profession; professional responsibilities; ethics; and engineering and society. A survey of graphical communication methods and an introduction to the design process used by engineers may be included.
*NOTE: ENGG 102 is restricted to Engineering students*

**ENGG 130**
**Engineering Mechanics I**
*3 credits, 3 hours lecture, 2 hours lab*
4.0 Engineering units for the University of Alberta
This course focuses on static equilibrium of forces, principles of two and three dimensional equilibrium, analysis of statically determined structures -trusses and frames, and principles of friction and virtual work.
Prerequisite: Math 30-1, Math 31 and Physics 30
*Co-requisite: MATH 100*
*NOTE: ENGG 130 is restricted to Engineering students*

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**ENGG 210**
**Engineering Graphics**
*3 credits, 2 hours lecture, 3 hours lab*
3.5 Engineering units for the University of Alberta
This course includes sketching, drafting and interpretation of pictorials and multi-views of three-dimensional objects; visual design; and an introduction to scales, sectioning and dimensioning. AUTOCAD software is used for the computer- aided drafting (CAD) portion of the course.
*NOTE: ENGG 210 is restricted to Engineering students. ENGG 210 transfers as a required course for Mechanical and Mining and Civil Engineering at University of Alberta*

**ENGG 310**
**Engineering Economy**
*3 credits, 3 hours lecture*
The application of the fundamentals of economics to engineering alternatives in planning, developing and managing industrial projects.
*Prerequisite: Permission of the Program Chair*

**ENGL 010**
**English 010**
*5 credits, 5 hours lecture*
This is a language skills course emphasizing remedial grammar, paragraph writing, the basic terminology used to analyse literature, and the study of various forms of literature.
*Alberta Education Course Equivalency: English 10 (10-1)*
*Prerequisite: AFL 009 with a minimum grade of B or equivalent or permission from the Program Chair*

**ENGL 013**
**English 013**
*5 credits, 5 hours lecture*
English 013 focuses on the development of communication skills. The emphasis is on the development of vocabulary, spelling ability, reading skills, verbal expression, and good fundamental writing skills in order to better equip the student for everyday life.
*Alberta Education Course Equivalency: English 13 (10-2)*
*Prerequisite: AFL 009 or equivalent or permission from the Program Chair*

**ENGL 020**
**English 020**
*5 credits, 5 hours lecture*
This course is a continuation of English 010. It includes instruction in composition and remedial grammar, together with the study of selected short stories, novels, drama and poetry.
*Alberta Education Course Equivalency: English 20 (20-1)*
*Prerequisite: ENGL 010 or equivalent or permission from the Program Chair*

**ENGL 023**
**English 023**
*5 credits, 5 hours lecture*
English 023 continues the format of English 013. The course offers instruction in various forms of communication (both oral and written). The emphasis in the course is to further develop those skills, such as vocabulary, spelling, reading, comprehension, grammar, and writing, encouraged in English 013.
*Alberta Education Course Equivalency: English 23 (20-2)*
*Prerequisite: ENGL 013 or ENGL 010 or equivalent or permission from the Program Chair*

**ENGL 030**
**English 030**
*5 credits, 6 hours lecture*
This course completes the 010, 020, 030 sequence and prepares students for post-secondary university study in English. It includes the study of composition and all major literary forms: poetry, essay, short story, novel, Shakespearean and modern drama. A substantial writing component is included.
*Alberta Education Course Equivalency: English 30 (30-1)*
*Prerequisite: ENGL 020 or equivalent or permission from the Program Chair*

**ENGL 033**
**English 033**
*5 credits, 5 hours lecture*
English 033 completes the English 013, 023, 033 sequence. The course is designed to further develop the comprehension, writing, and vocabulary skills of the student. Basic grammar and writing skills will be reviewed and utilised in practical writing exercises.
*Alberta Education Course Equivalency: English 33 (30-2)*
*Prerequisite: ENGL 023 or ENGL 020 or equivalent or permission from the Program Chair*

**ENGL 100**
**Written Composition**
*3 credits, 45 hours lecture*
This course focuses on expository writing skills. Students will develop and organize their thoughts as they study examples of good prose and practice revising their own work. By following the steps of the writing process, students will learn to write clear, well-structured, interesting essays. Course requirements include writing essays, a summary, a report and a research paper.

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**ENGL 121**
**Literature in Historical Perspective**
*3 credits, 3 hours lecture*
This course introduces students to post-secondary studies in English by exploring developments in language, literature, and culture in and over time. Students will have opportunities to study particular themes and compare different genres in and across a broad array of texts, placed in their historical contexts, which may range from medieval to contemporary times. The course will examine the conditions under which texts were originally produced and may consider the reception and reshaping of texts in history to the present. This course will satisfy all faculties' requirements of a first-year English credit.
*Prerequisite: English 30 or 30-1 or equivalent*
*NOTE: Not to be taken by students with 6 credits in approved junior English*

**ENGL 122**
**Texts and Contexts**
*3 credits, 3 hours lecture*
This course introduces students to post-secondary studies in English by focusing on a specific literary theme (to be determined by the instructor) in a cluster of related texts. Students may expect to encounter fiction, poetry, drama, and non-fictional prose, as well as visual media. The course will enable students to explore a particular subject in-depth as well as a broad range of materials and to acquire a rich sense of contexts or intellectual landscapes that give shape to the study of literature and culture. A minimum of 30% of class time will be devoted to writing instruction. This can take many forms, including graded written assignments, informal writing exercises, writing workshops, free-writing exercises, stylistic analysis, research skills, peer editing, multiple drafts, and ungraded writing. Students will be required to write at least two essays which will be marked and formally graded. During the course, students will write at least 3000 words.
*Prerequisite: English 30 or 30-1 or equivalent*
*NOTE: Not to be taken by students with 6 credits in approved junior English*

**ENGL 124**
**Literary Analysis**
*3 credits, 3 hours lecture*
This course introduces students to post-secondary studies in English by developing skills in the close reading of language, genre, narrative, and poetic form. Rather than focusing on historical or cultural contexts (although these may come into play), this course concentrates on literary forms and structures, and on developing a critical vocabulary for literary analysis. Students can expect to encounter a variety of shorter genres in the literary tradition (the short story, poems, and essays) as well as film and other visual media.
*Prerequisite: English 30 or 30-1 or equivalent*
*NOTE: Not to be taken by students with 6 credits in approved junior English*

**ENGL 125**
**Aboriginal Writing**
*3 credits, 3 hours lecture*
This course introduces students to post-secondary studies in English through works by Aboriginal writers. It will address aesthetics, concepts, approaches, and debates that inform the production and study of Aboriginal literatures. It will analyze the roles literature plays in shaping and reflecting Aboriginal identities, communities and histories. The course will examine several genres that can include traditional stories, fiction, poetry, drama, history, autobiography, essays and speeches. Materials, themes, topics and genres will vary among instructors. A minimum of 30% of class time will be devoted to writing instruction. This can take many forms, including graded written assignments, informal writing exercises, writing workshops, free-writing exercises, stylistic analysis, research skills, peer editing, multiple drafts and ungraded writing. Students will be required to write at least two essays which will be marked and formally graded. During the course, students will write at least 3000 words.
*Prerequisite: English 30 or 30-1 or equivalent*
*NOTE: Not to be taken by students with 6 credits in approved junior English*

**ENGL 126**
**Reading Popular Culture**
*3 credits, 3 hours lecture*
This course introduces students to post-secondary studies in English through the close reading of popular culture texts, including zines, magazines, film, television, advertising, the internet, and non-canonical fiction and non-fiction. It will address the aesthetics, concepts, theories, and debates that inform the production and consumption of popular culture, and analyse the role of pop culture in shaping beliefs, identities and social practices. Materials, themes, topics, and genres will vary among instructors.

**ENGL 206**
**The Short Story**
*3 credits, 3 hours lecture*
This course provides an introduction to the short story by tracing the development of the genre and critically analyzing a substantial number of short stories. The emphasis will be upon a detailed examination of short stories by acknowledged masters of the form: Poe, Hawthorne, Maupassant, Chekhov, James, Joyce and others.
*Prerequisite: 6 credits of junior English*

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**ENGL 208**
**Reading Histories: Making Books**
*3 credits, 3 hours lecture*
An introduction to the social and cultural history of print text, and to the critical concepts and methods key to its study, that emphasizes the relationship between the production of books and the production of culture.
*Prerequisite: 6 credits of junior English*

**ENGL 221**
**Reading Politics: Class and Ideology**
*3 credits, 3 hours lecture*
English 221 will examine ideas of class as expressed in texts of the nineteenth and early twentieth centuries. At a time when class distinctions determined and restricted virtually every aspect of daily life, writers reflected, reinforced, and also undermined those distinctions in their work. We will use critical tools of late twentieth-century writings on class and ideology to explore the earlier texts, with a view to understanding cultural representations of class and class relations. What does it mean to "belong" to a particular class? How did one's "station in life" control one's fate? How is literature itself a product of class? Karl Marx pointed out, "The ideas of the ruling class are in every epoch the ruling ideas," and this course will investigate how those ruling ideas were conveyed.
*Prerequisite: 6 credits of junior English*

**ENGL 224**
**The Literary Institution**
*3 credits, 3 hours lecture*
This course analyzes the object of English Studies itself. It considers the developmental history of English as a university course and what is involved in the process of separating all writing into the specific category of Literature. It deals with the formation of a literary canon and the various interpretive strategies which either determine that canon or may be applied to it. Students will read literary theory by scholars such as Terry Eagleton, Paulo Freire, Louis Menand, Robert Scholes, Edward W. Said, Harold Bloom, Roland Barthes, Stanley Fish, Wayne C. Booth, Sandra M. Gilbert and Susan Gubar and others. They will apply theory to case studies in imaginative literature.
*Prerequisite: 6 credits of junior English*

**ENGL 239**
**Shakespeare**
*3 credits, 3 hours lecture*
This course introduces students to the broad range of Shakespearean Drama with selections from the tragedies, comedies, histories and romances. It involves a close analytical reading of eight or more plays, and a consideration of several critical approaches to the Shakespearean canon. The selections will include the more generally acclaimed plays, such as Hamlet and Henry V and the less well-known works, such as Coriolanus and The Winter's Tale.
*Prerequisite: 6 credits of junior English*

**ENGL 288**
**Folklore in Children's Literature in English**
*3 credits, 3 hours lecture*
This three-credit senior English course will examine folklore and fantasy in children's literature. It will examine both traditional, anonymous works, including nursery rhymes, fables, folktales and myths, and modern works incorporating traditional materials. Students will be expected to write essays totalling about 2,000 words.
*Prerequisite: 6 credits of junior English*

**ENGL 289**
**Children's Literature in English**
*3 credits, 3 hours lecture*
This three-credit senior English course will trace the history of children's literature and explore its evolution from didacticism to delight. A survey of its rich variety will include analysis of animal stories, literary fantasy, adventure and realism. Through the study of classic and contemporary works, students will develop an understanding of literary theory and criticism. Students will be expected to write two essays totalling about 2,000 words.
*Prerequisite: 6 credits of junior English*

**ENGL 293**
**Science Fiction**
*3 credits, 3 hours lecture*
An introduction to science fiction as a genre and a survey of works and trends.
*Prerequisite: 6 credits of junior English*

**ENGL 294**
**Introduction to Writing Poetry**
*3 credits, 3 hours lecture*
This course will be conducted as a seminar, using contemporary poems and the students' own work for study and discussion. Students will be expected to read widely, write extensively, and complete a portfolio of finished poetry by the end of the term. In addition, students will keep a writing journal and will complete specific in-class and out-of-class assignments exploring poetic form, style, and technique.
*Prerequisite: 6 credits of junior English*

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**ENGL 325**
**The Arthurian Tradition in Literature**
*3 credits, 3 hours lecture*
This three-credit senior English course will explore the origins, development and significance of the King Arthur legends in English literature. The "Matter of Britain", with its archetypal evocations of questing, heroism and betrayal, has been woven into the fabric of English literature for over six hundred years. This course will examine how the material has been reinterpreted by succeeding generations while still retaining its mythic power.
*Prerequisite: 6 credits of junior English*

**ENGL 358**
**American Literature to 1900**
*6 credits, 3 hours lecture*
This course examines the fiction, non-fiction and poetry of American writing prior to this century. The various schools and movements of American Literary history are examined, but the major emphasis will be placed on authors constituting the "American Renaissance" circa 1850. The progression of the course is chronological, and an historical perspective will be maintained.
*Prerequisite: 6 credits of junior English*

**ENGL 360**
**The Early Twentieth-Century American Novel**
*3 credits, 3 hours lecture*
This course examines the development of the American Novel circa 1900-1940, concentrating on Henry James, Ernest Hemingway and William Faulkner. Additional works will be selected from the novels of such authors as Theodore Dreiser, Edith Wharton and F. Scott Fitzgerald. The novels will be viewed analytically to determine the American contribution to the form and function of the novel in this century.
*Prerequisite: 6 credits of junior English*

**ENGL 365**
**The Early Twentieth-Century British Novel**
*3 credits, 3 hours lecture*
This course critically examines a selection of the best British novels of the first half of the twentieth century. It is a period in which traditional and historical conceptions of the form, content, and purpose of the novel underwent an intense and radical re-examination. This course introduces students to both the experimental and the more traditional works of the period, and will consider the work of Joyce, Lawrence, Woolf, and others.
*Prerequisite: 6 credits of junior English*

**ENGL 368**
**Early Twentieth-Century Drama**
*3 credits, 3 hours lecture*
This course offers an introduction to the study of modern drama and its forms in the British and American tradition (with some examination of Continental influences) from the 1890's to about 1950.
*Prerequisite: 6 credits of junior English*

**ENGL 376**
**Canadian Literature Since 1960**
*3 credits, 3 hours lecture*
A critical and historical study of representative Canadian writing in English since 1960. Through representative Canadian Literature since 1960 by writers from the Atlantic to the Pacific regions depicting differences in gender, ethnicity, race and sexual orientation, this course elucidates shifts in literary patterns and cultural realities during this phase. Questions will be addressed regarding the impact of social and technological changes on Canadian literature.
*Prerequisite: 6 credits of junior English*

**ENGL 378**
**Canadian Literature by Women**
*3 credits, 3 hours lecture*
English 378 is a study of Canadian literature across the genres by Canadian women writers from the mid-nineteenth century to the present. Literature will be read for its representation of dominant literary concerns of its time and its use of specifically women's themes and structures. Readings will address the relationship between Canadian literature by women and the literary canon and specific schools of feminist literary criticism.
*Prerequisite: 6 credits of junior English*

**ENGL 379**
**Canadian Literature, 1925-1960**
*3 credits, 3 hours lecture*
A critical and historical study of representative Canadian writing in English from 1925 – 1960. Through representative Canadian Literature from 1925 to 1960 by writers of different genders and different ethnic backgrounds from the Atlantic to the Pacific regions, this course elucidates the literary and cultural shifts during this phase. The focus is on literature as a reflection of the changing Canadian identity. Questions will be addressed regarding the swings from rural to urban lifestyles and in literary conventions from realism to modernism.
*Prerequisite: 6 credits of junior English*

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**ENGL 391**
**Traditions in Women's Literature II**
*6 credits, 32 weeks, 3 hours lecture*
English 391 is a study of literature across the genres by women writers from the mid-twentieth century to the present. Literature will be read for its representation of dominant literary concerns of its time and its use of specifically women's themes and structures. Readings will question the relationship between women's literature and both the literary canon and the respective influential schools of literary criticism.
*Prerequisite: 6 credits of junior English*

**ENGL 397**
**Early 20th Century Literature and Culture: Modernism and Modernity**
*3 credits, 3 hours lecture*
This course will study the development of Modernism and its influence on the style and subject matter of Twentieth Century literature. It will focus primarily – but not exclusively – on poetry. Students will learn the aesthetic, social and historical forces that led to Modernism. They will see how World War I provides the metaphor for the modern world and learn the continuing impact Modernism has on current literature. This course will provide a perspective on the movement, literature and age of Modernism. It will focus on representative authors of the period within their historical and cultural contexts. It will study the literature and culture of the era that responded to Ezra Pound's imperative to "make it new".
*Prerequisite: 6 credits of junior English*

**ENPHY 131**
**Mechanics**
*3 credits, 3 hours lecture, 1 hour tutorial, 3 hours lab every second week*
4.3 Engineering units for the University of Alberta
Kinematics and dynamics of particles, gravitation, work and energy, linear momentum, angular momentum, systems of particles, introduction to dynamics of rigid bodies, accompanied by related laboratory work.
*Prerequisite: MATH 100 and ENGG 130*
*Co-requisite: MATH 101*
*Pre- or Co-requisite: PHYS 1130*
*NOTE: ENPHY 131 is restricted to Engineering students*

**ENVS 100**
**Traditional Land Use**
*3 credits, 3 hours lecture, 3 hours lab/field study*
This course will develop students' ability to understand Traditional Land Use, purpose of TLU assessments, preparing and planning TLU assessments and implementing TLU assessments through field study interviewing, mapping, translation, data validation and conducting community reviews.

**ENVS 110**
**Environmental Planning**
*3 credits, 3 hours lecture, 3 hours lab/field study*
This course will develop students' ability to understand environmental planning theory, planning applications in pipeline and linear development sites, construction and operations. Field study will include: route selection and planning, water crossings, vegetation management, soil erosion management, storm water management, ancillary facilities and access roads.

**ENVS 120**
**Environmental Inspection, Monitoring and Auditing**
*3 credits, 3 hours lecture, 3 hours lab/field study*
This course will develop students' ability to understand the concepts of inspection, monitoring and auditing, gain knowledge of government regulations and related permit and license requirements, understand the inspection and monitoring terms of reference associated with regulatory compliance and environmental mitigation, interpret line and site drawings, environmental assessment documents, mitigation programs and contractor scope of work. Students will engage in exercises and field study to apply inspection, monitoring and auditing knowledge in real situations.

**ENVS 130**
**Reclamation**
*3 credits, 3 hours lecture, 3 hours lab/field study*
Students in ENVS 130 will become familiar with provincial and federal reclamation criteria and compliance requirements, understand typical terms of reference associated with reclamation, develop landowner and land occupant communication skills. Students will engage in exercises and field study to complete preliminary site assessments for reclamation planning and cost estimates, and apply reclamation programs to real situations. Assist in the assessment and development of a reclamation program. Assist with soil sampling for reclamation of contaminated sites and complete detailed vegetation assessments for reclamation applications.

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**ENVS 140**
**Global Information Systems (GIS) Applications**
*2 credits, 2 hours lecture, 2 hours lab/field study*
Students in ENVS 140 will develop their ability to understand basic geomatics and basic map use and ground truthing. Field study will include: basic Geographic Positioning System use, managing data, mapping systems and applying thematic information.

**ENVS 150**
**Waste Management & Monitoring**
*3 credits, 3 hours lecture, 3 hours lab/field study*
Students in ENVS 150 will become familiar with waste management criteria and compliance requirements; understand typical terms of reference associated with hazardous waste, solid waste, liquid waste, consolidated tailings, sumps and drilling fluids, recycling, storage and containment. Students will engage in exercises and field study to apply waste management and monitoring programs to real situations.

**ENVS 180**
**Work Placement I**
*4 credits, 200 hours*
Students will be assigned by Keyano Designate Instructors to conduct lab and field study tasks and duties in all courses in the Environmental Theory sessions and Specialization Modules. Field study locations may require travel and may require trainees to camp outdoors or be accommodated in lodging arrangements. Students are interviewed and offered paid placements by Industry Stakeholders.

**ENVS 190**
**Work Placement II**
*4 credits, 200 hours*
Students are interviewed and offered paid placements by Industry Stakeholders.

**ENVT 111**
**Health and Safety for the Environment Industry**
*3 credits, 1 hour lecture, 3 hours lab*
This course provides an introduction to occupational health and safety and environmental topics to prepare students for entry into the workforce. The curriculum includes a series of modules and certifications to increase students' understanding of safe work practices and rights and responsibilities of employers and employees as related to analysis of problems and solutions in the environmental occupational sector. Students must demonstrate certifiable proficiencies in WHIMIS (Workplace Hazardous Materials Information System), Standard First Aid Level C, Wilderness Awareness, GPS basics (Global Positioning System), and other certifications as required by industry.

**ENVT 163**
**Water Quality**
*3 credits, 2 hours lecture, 3 hours lab*
This course provides an overview of water quality protection and pollution control of ground and surface water. Treatment of drinking water and municipal waste water, water quality guidelines for drinking water and surface water, pathogens, oxygen levels and nutrient loading, properties of water, related chemistry and terminology, ecology of lentic systems, turnover, thermal stratification, and hydrology of the northern river basin are discussed.
*Prerequisite: CHEM 101 and EAS 100*

**ENVT 165**
**Geotechnical Sampling & Instrumentation**
*3 credits, 2 hours lecture, 3 hours lab*
The course is an introduction to the practical field and laboratory techniques used in the construction of buildings, industrial facilities, roads, bridges, containment structures, waste handling facilities, power lines, pipe lines and recreation sites common to the area. Topics such as construction site safety and material sampling and testing (soil, gravel, concrete and asphalt) are covered.
*Prerequisite: EAS 100*

**ENVT 170**
**Animal Identification**
*3 credits, 2 hours lecture, 2 hours lab*
Students will develop identification skills necessary for identifying vertebrates and aquatic invertebrates of Alberta with a special emphasis on identifying provincially and/or federally listed species. Course topics include bird ID by sight and ear, mammal tracking and aquatic invertebrate collection and identification.
*Prerequisite or Co-requisite: BIOL 108*

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**ENVT 252**
**Regional Plant Identification**
*3 credits, 2 hours lecture, 2 hours lab*
This course covers identification and classification of native vascular plants, bryophytes, and lichens. Topics include plant identification, taxonomy, species concept, morphology, sampling, pressing, mounting, plant collections, voucher sets, herbarium specimens, and relevant resource material. A plant collection is required.
*Prerequisite: BIOL 108*

**ENVT 262**
**Environmental Laws, Guidelines, Regulations & Land Rights**
*3 credits, 3 hours lecture*
This course provides an understanding of Acts and Regulations under municipal, provincial and federal jurisdiction as they relate to environmental protection and development of natural resources in Alberta. Key pieces of legislation this course examines include the Alberta Environmental and Protection and Enhancement Act, Alberta Land Stewardship Act, Public Lands Act, the Species at Risk Act, the Fisheries Act, and Treaty 8. Special emphasis is placed on developing skills to independently obtain information and therefore remain current on environmental protection standards because legislation and policy is continuously re-examined by legislative bodies.

**ENVT 265**
**Forest Technology**
*3 credits, 3 hours lecture, 3 hours lab*
The course provides the student with an overview of the forest industry in the Boreal Forest in Western Canada. Topics covered include utilization of tree species by sawmill operations and pulp and paper mills, the ecology of the tree species used, recent developments in forest management practices, stand assessment, forest mensuration, siliviculture, dendrology, and forest pests and control. An introduction to aerial photography interpretation, map use, and compassing is given.
*Prerequisite: BIOL 208*

**ENVT 266**
**Land Reclamation**
*3 credits, 3 hours lecture, 3 hours lab*
Reclamation objectives, practices and assessment strategies will be discussed as they related to planned components of resource extraction activities, and as they related to post-hoc reclamation initiatives. The focus of this course is on methods of prevention control, and remediation of altered or degraded land as a result of human activities. This includes, but is not limited to, the decommissioning of base metal and oil sands mine sites, pipelines, and redevelopment of urban brownfields. A significant portion of the course involves synthesizing concepts from throughout the ENVT program in the form of independent projects with an emphasis placed on student-directed learning. This capstone course is taken in a student's final semester of the ENVT Diploma program.
*Prerequisite: ENVT 252, ENVT 262, SOILS 210 AND STAT 151*

**ENVT 268**
**Resource Exploitation – Oil, Gas, Bitumen & Mining**
*3 credits, 3 hours lecture, 3 hours lab*
This course provides an introduction to the upstream and downstream oil, gas, oil sands and mining industries primarily in Western Canada. Topics covered include geology of the hydrocarbon reservoirs, exploration, market and economic conditions, ecological impact of linear disturbances, lease tenure systems, drilling operations, site reclamation, pipeline networks, sour gas, and history of development in Alberta. Aspects of other mineral resource activities in Alberta and the NWT are also covered.
*Prerequisite: EAS 100*

**ENVT 270**
**Wildlife Management and Conservation**
*3 credits, 3 hours lecture, 1 hour tutorial*
The course provides students with a synthesis of wildlife ecology, conversation and management in industrial, agricultural, urban, rural, and wilderness environments. Both game and non-game species in terrestrial and aquatic environments are considered. Specific topics addressed include: population biology; wildlife/ habitat relationships; herbivory and predation; behavioral ecology; competition; parasites and pathogens; population sampling; conservation biology and management techniques. Field trips are required.
*Prerequisites: ENVT 170 and BIOL 208*

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**FREN 111**
**Beginners' French I**
*3 credits, 5 hours lecture*
Designed for students with little or no previous background in French. Covers material in matriculation-level French and allows students to proceed into the study of French at the University level.
*NOTE: Not to be taken by students with credit in FREN 100, or with Native or near Native proficiency, or with French 30 or its equivalents (e.g. French 20S or 20N etc.) in Canada and other countries*

**FREN 112**
**Beginners' French II**
*3 credits, 5 hours lecture*
Continues to cover material in matriculation-level French and allows students to proceed into the study of French at the University level.
*Prerequisite: FREN 111 or permission of Program Chair*
*NOTE: Not to be taken by students with credit in FREN 100, or with Native or near Native proficiency, or with French 30 or its equivalents (e.g. French 20S or 20N etc.) in Canada and other countries*

**FREN 155**
**French Reading Comprehension**
*3 credits, 3 hours lecture*
French 155 is a basic course in French grammar and reading comprehension designed to teach students the fundamentals and skills required to read French at an intermediate level. There is no emphasis or practice of oral skills in French and the language of instruction is English.
*Prerequisite: French 30, French 100, French 111, French 112 or equivalent*
*NOTE: This course is not open to students with credit in FREN 150, FREN 200, FREN 211 or FREN 212. This course may be followed by FREN 156*

**FREN 156**
**Further Reading in French**
*3 credits, 3 hours lecture*
French 156 is the continuation of French 155. French 156 is an intermediate course in French grammar and reading comprehension to teach students the fundamentals and skills required to read French at an advanced level. There is no emphasis or practice of oral skills in French and the language of instruction is English.
*Prerequisite: FREN 155 or permission of Program Chair*
*NOTE: This course is not open to students with credit in FREN 150, FREN 200, FREN 211 or FREN 212*

**FREN 211**
**Intermediate French I**
*3 credits, 5 hours lecture*
Spoken and written French, including grammar, composition, and literature.
*Prerequisite: FREN 100, French 30 (or equivalent) or French 112 or permission of Program Chair*
*NOTE: Not to be taken by students with credit in FREN 150*

**FREN 212**
**Intermediate French II**
*3 credits, 5 hours lecture*
Continues to cover the material in spoken and written French, including grammar, composition and literature.
*Prerequisite: FREN 211 or permission of Program Chair*
*NOTE: Not to be taken by students with credit in FREN 150*

**FST 210**
**An Introduction to Film Analysis**
*3 credits, 3 hours lecture*
This course introduces students to the critical analysis of films and filmmaking, with an emphasis on the art of the director. The course offers a survey of styles and genres from Canadian and international feature film. The majority of films are contemporary, but we will also examine a few classics to better understand on-going conventions, such as continuity editing.
*Prerequisite: 6 credits in junior English or ARTH 101 and ARTH 102, or equivalent*

**GENET 270**
**Foundations of Molecular Genetics**
*3 credits, 3 hours lecture, 1.5 hours seminar*
This course will focus on concepts of the organization and expression of genetic material with particular focus on experiments that have been done with bacteria and viruses.
*Prerequisites: BIOL 207*

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**GEOG 020**
**Geography 20**
*5 credits, 5 hours lecture*
This courses will focus on generational changes in settlement patterns related to industrial development, the physical features of and systems related to the working of a town or city; the social characteristics of peoples; and the relationship of neighborhoods to their urban centers, regions and provinces. Special attention will be paid to the settlement patterns in the Regional Municipality of Wood Buffalo as compared to those seen in other regions of the country.
*Alberta Education Course Equivalency: Local and Canadian Geography 20*
*Prerequisite: SOST 010 or permission from the Program Chair*
*Co-requisite: ENGL 020 or ENGL 023 or permission from the Program Chair*

**GEOG 030**
**Geography 030**
*5 credits, 5 hours lecture*
This course will focus on world patterns of population and settlement, in humankind's use of the Earth, and of our physical world. Topics will include the major cities of the world; changes in world economies as humankind moves from hunter-gathering into the information age; and the importance of global climate, land masses, vegetation, soils or bodies of water to human population, settlement and economies.
*Alberta Education Course Equivalency: World Geography 30*
*Prerequisite: SOST 010 or permission from the Program Chair*
*Co-requisite: ENGL 020 or ENGL 023 or permission from the Program Chair*

**GEOG 105**
**Introduction to Mapping, GPS, Remote Sensing, and GIS**
*3 credits, 3 hours lecture, 3 hours lab*
The course will train students in the use and application of paper, digital, and computer methods for acquisition, presentation and interpretation of geospatial data. Topics will include topographic and reference maps, scales and coordinate systems, land survey systems, global positioning systems (GPS), thematic maps, remote sensing air photo interpretation, and the utilization of geographical information systems (GIS) with ArcView. Emphasis will be placed on practical applications, but some understanding of basic principles is also essential. Lab work will cover a broad spectrum of interest areas, but also linked where possible to environmental applications.

**HCA 110**
**Working as a Health Care Aide**
*3 credits, 40 hours lecture, 5 hours lab*
This course will provide the student with the opportunity to learn the roles and responsibilities of the Health Care Aide including being familiar with the provincial legislation that guides safe ethical personalized care. In addition the student will learn about providing safe client care, ensuring environmental safety, and self care and safety while working in a team environment.

**HCA 111**
**Communication in the Health Care Environment**
*2 credits, 21 hours lecture, 9 hours lab*
This course focuses on communication within the health care team. Communication with clients and their families and written communication including documentation in client records and report completion is also covered. Strategies will be introduced related to problem solving, and conflict management.
*Prerequisites: HCA 110*

**HCA 112**
**Structure and Function of the Human Body: Health and Chronic Illness**
*3 credits, 39 hours lecture*
In this course the student will study 10 systems that make up the human body as well as growth and development across the lifespan. The students will learn about the most common chronic illnesses and how to provide safe care to the individual client.
*Prerequisites: HCA 110 and HCA 111*

**HCA 113**
**Providing Client Care and Comfort**
*2 credits, 28 hours lecture, 35 hours lab*
The student will learn to safely bath a client in the bed, tub and shower. Bedmaking skills, assisting with elimination and meals will be introduced. Body mechanics for both client and staff will be emphasized. Infection prevention and control guidelines and safety measures to prevent slips, trips, falls and accidental scalding will be introduced.
*Prerequisites: HCA 112*

**HCA 114**
**Meeting Complex Care Needs**
*1 credit, 17.5 hours lecture, 23.5 hours lab*
This course will provide the student with knowledge related to keeping the client's joints exercised through range of motion exercises. The student will also learn skills necessary for supporting care activities such as ostomy care, respiratory and catheter care, specimen collection, wound care and measuring vital signs, pain, height and weight.
*Prerequisites: HCA 113*

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**HCA 115**
**Assisting with Medication Delivery**
*1 credit, 6 hours lecture, 12 hours lab*
The student will learn to work safely within legal roles and responsibilities related to safe medication delivery. The theory and labs in this course will assist the student to undertake this task with competence and confidence.
*Prerequisites: HCA 114*

**HCA 116**
**Special Activities for Diverse Clients**
*3 credits, 47 hours lecture, 2 hours lab*
This course discusses care strategies for assisting diverse client groups such as clients with mental health diagnosis and clients with development delays and physical disabilities. Assisting with infant and child care will be discussed. Included in this course are modules that deal with understanding the disease process that causes both cognitive and physical decline in clients with a diagnosis of dementia. Skills and strategies relating to provision of care for clients with dementia will be identified.
*Prerequisites: HCA 115*

**HCA 117**
**Practicum**
*3 credits, 200 hours*
Under the direction of a RN or LPN students will work on a continuing care unit and a designated assisted living site providing care and support for clients.
*Prerequisites: Successful completion of all HCA certificate courses*

**HE ED 102**
**Health Education: Individual Health & Wellness**
*3 credits, 45 hours lecture*
This course is designed to offer an overview, within the context of the community and the Canadian Health Care system, of the physical, social, mental, environmental and spiritual aspects of personal health and wellness. Topics include nutrition, exercise, stress management, weight management, eating disorders, common health problems and their prevention and primary health care. This course includes an individualized analysis of personal health issues and physical fitness. Students will be expected to demonstrate knowledge of the concepts of health and wellness, describe their dimensions and plan, implement and report on a specific wellness plan or project as it relates to their own life. This is a theory course, which is applied in nursing courses.

**HE ED 110**
**Introduction to Personal Health and Well Being**
*3 credits, 3 hours lecture, 1 hour lab*
An individual-based analysis of physical fitness and personal health issues. Emphasis on planning and managing one's own lifestyle for health and well-being within the context of the current health care system. Open to all students.

**HE ED 220**
**Introduction to Biological Aspects of Fitness & Health**
*3 credits, 3 hours lecture, 1 hour lab*
A biological analysis of the contributions of physical activity and exercise to fitness and long term health. Emphasis is on the introduction of training principles, health related components of physical fitness, exercise and physical activity guidelines, and the application of these concepts for determination of physical fitness, individual long term outcomes, and preventable disease.

**HE ED 311**
**Assessment of Fitness and Health**
*3 credits, 3 hours lecture, 2 hours lab*
Students will gain knowledge in fitness, health and research appraisal. Emphasis will be given to validity and reliability of various assessments and factors involved in the assessment of performance and health assessment.
*Prerequisites: PEDS 200 and one of STAT 141 or 151*

**HETD 110**
**Introduction to Heavy Equipment Service Industry**
*2.5 credits, 40 hours*
Students will learn about the history of Heavy Equipment manufacturers and their product line(s). Best practices regarding safety, materials and tools will be addressed in addition to an introduction to shop facilities and equipment. Students will become familiar with Service Information Systems(s) as well as computer operation.

**HETD 120**
**Truck and Trailer Suspension and Steering**
*3 credits, 50 hours*
This course will help students understand the fundamentals and servicing of truck and trailer frames and suspension; wheels, tires and hubs; trailer landing gear; coupling units; trailer types and an introduction to trailer inspection as directed by the Commercial Vehicle Inspection program; oxy-fuel heating and cutting; and preventive maintenance.

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**HETD 130**
**Air Brakes**
*2.5 credits, 45 hours*
This course will look at the fundamental operation of air brakes, operating principles of mechanical components, and pneumatic components in a typical air brake system. Trailer air brake components operation is covered along with system testing and diagnostics. Antilock brakes are also covered within this course including antilock brakes.

**HETD 140**
**Fundamentals of Hydraulics**
*4.5 credits, 80 hours*
This course is an exploration of the principles and concepts of hydraulics. Hydraulic oil and contamination control principles are discussed in this course. Pumps, actuators, motors and valves are covered including types and operation. Reservoirs, filters, hoses and coolers are covered as well as accumulators. ISO symbols are used to identify components and some basic hydraulic systems are explored. Included in this course will be hydraulic brake systems including drum and sic brakes, brake boosters, parking brakes as well as electric brakes. The servicing of these systems is also covered.

**HETD 150**
**Safety Training**
*1.5 credits, 25 hours*
Topics covered in this course include customer service and communications, forklift training, rigging, safety orientation and corporate overview as well as other topics deemed necessary for students to complete prior to commencing their work experience.

**HETD 190**
**Work Placement I**
*4.5 credits, 320 hours*
Placement will occur at a specific industry partner location. In the event that a placement is not available, the student will be required to arrange a practicum placement with the assistance of the college.

**HETD 210**
**Engine Fundamentals**
*6.5 credits, 110 hours*
This course provides the student with an introduction to the engine product lines. Fundamentals and components are covered before going into the various engine systems. These systems include air induction and exhaust, supercharging, lubrication and cooling systems. Disassembly, inspection and reassembly are also covered in the classroom and shop.

**HETD 220**
**Engine Fuel Systems**
*5.5 credits, 90 hours*
This course will cover diesel fuel and storage tanks; combustion process and starting aids; the basic fuel injection system; fuel system servicing; the port/ helix metering fuel system; opposed plunger inlet fuel metering system; fuel injectors; emergency shutdown systems; various types of fuel systems; governors; electronic fuel management fundamentals, components, tune-up and analysis; gasoline fuel injection; and alternate fuel systems.

**HETD 230**
**Electrical Fundamentals**
*2.5 credits, 40 hours*
This course will introduce students to basic electrical and electronic fundamentals. Topics included are: electrical circuits; electrical components and symbols; the use of test equipment and techniques when working with electronic ignition systems; and batteries, battery service and testing.

**HETD 290**
**Work Placement II**
*4.5 credits, 320 hours*
Placement will occur at a specific industry partner location. In the event that a placement is not available, the student will be required to arrange a practicum placement with the assistance of the college.

**HETD 310**
**Power Train I**
*5.5 credits, 95 hours*
This course will explore power train components that are mechanical power transfer units. These include clutches, driveline, manual transmissions, transfer cases and drive axle assemblies. Topics will also include; gear principles, transmission shifting and the servicing of the previous assemblies.

**HETD 320**
**Electrical Systems**
*6 credits, 100 hours*
Concentration in this course will be on the charging and starting systems going through the operation of 12 and 24 volt systems. Testing, overhaul and troubleshooting are covered as well as starter drives and non-electric starting systems. Truck and machine electrical and accessory circuits are also discussed in this section.

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**HETD 330**
**Air Conditioning Systems**
*2.5 credits, 45 hours*
The physics involved in air conditioning systems are covered; students will then progress to controls systems and system components. The procedure for testing and service are covered as well as the diagnostic procedures to be accomplished in a safe and environmentally secure manner. Various tools and the proper use of equipment will be covered.

**HETD 390**
**Work Placement III**
*4.5 credits, 320 hours*
Placement will occur at a specific industry partner location. In the event that a placement is not available, the student will be required to arrange a practicum placement with the assistance of the college.

**HETD 410**
**Machine Hydraulic Systems**
*6.5 credits, 110 hours*
This course is designed to teach the system operations as well as the testing and adjusting procedures for the pilot operated hydraulic system, the load sensing, pressure compensated (LSPC) hydraulic system, the electro-hydraulic system, and the hydrostatic system. Students will identify the system components, state the component function and trace the oil flow through the component. This section will be covered on different types of machines.

**HETD 420**
**Power Train II**
*6 credits, 100 hours*
Students will continue to study Power train drives focusing on those which have a hydraulic component. Torque converters, gearing principles, power shift and automatic transmissions are covered in relation to operation, diagnostics and service procedures. Also included are hydraulic retarders, tracked equipment steering and undercarriage fundamentals and service. Final drive operation and service, differentials as applied to off-road will also be discussed. Wheeled equipment steering and suspension as well as off-road equipment accessories and attachments will be discussed in reference to off-road machines.

**HETD 440**
**On-Highway Steering**
*2 credits, 30 hours*
Students will cover the fundamentals of steering as well as service of steering systems. Also covered will be steering angles and alignment and an orientation to vehicle inspection.

**HETD 490**
**Work Placement IV**
*4.5 credits, 320 hours*
Placement will occur at a specific industry partner location. In the event that a placement is not available, the student will be required to arrange a practicum placement with the assistance of the college.

**HETD 510**
**Machine Electronics**
*3.5 credits, 60 hours*
This course introduces the student to machine electronic systems and diagnostic tooling need by a technician to properly diagnose and repair the complex electrical/ electronic systems.

**HETD 520**
**Machine Diagnostics**
*4 credits, 70 hours*
This course introduces the student to machine problem identification using diagnostic tooling and reference material to properly diagnose and repair the complex systems. The course will concentrate on repairing logic and applications, using a troubleshooting and diagnosis process, to solve machine faults in the power train, hydraulic system and electrical system.

**HETD 530**
**Engine Diagnostics and Repair**
*3.5 credits, 60 hours*
This course is an in-depth study of engine diagnostics and repair techniques. Students will acquire the knowledge to diagnose and correct engine deficiencies while utilizing diagnosis and troubleshooting procedures, use of diagnostic tools, and use of reference material. The four major engine systems studied are oil, air, cooling and fuel.

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**HETD 540**
**Machine Specifics**
*3 credits, 50 hours*
This course introduces students to machine specific systems. The course material will provide students with a general knowledge of machine specific systems.

**HETD 590**
**Work Placement V**
*4.5 credits, 320 hours*
Placement will occur at a specific industry partner location. In the event that a placement is not available, the student will be required to arrange a practicum placement with the assistance of the college.

**HIST 111**
**Early Modern World History**
*3 credits, 3 hours lecture*
This course is an introduction to world history from the fifteenth century to 1815. Themes to be discussed will include cross- cultural encounters, political and economic developments on a national and global scale. Students will also be introduced to the discipline of history.

**HIST 112**
**The Modern World**
*3 credits, 3 hours lecture*
This course is an introduction to world history 1815 to the present. Themes to be discussed will include nineteenth century imperialism, nationalism, revolution war and decolonization. Students will also be introduced to the discipline of history.

**HIST 228**
**The Early History of the British Peoples**
*3 credits, 3 hours lecture*
This course is an introduction to the history of the British Isles from ancient times to 1688, with a particular focus on the history and development of England. The course will cover the main themes in British political, social, economic and cultural history, and will provide students with a foundation for senior courses in British history.

**HIST 232**
**Ireland from Early Times to the Present Day**
*3 credits, 3 hours lecture*
This course is an introduction to the history of Ireland from ancient times to the present day. The course will cover the main themes in Irish political, social, economic and cultural history, and will provide students with a foundation for senior courses in Irish history.

**HIST 250**
**The United States to 1865**
*3 credits, 3 hours lecture*
This course is an introduction to the history of the United States from colonial times to the end of the Civil War. The course will cover the main themes in American political, social, economic and cultural history, and will provide students with a foundation for senior courses in American history.

**HIST 260**
**An Introduction to the Study of Canadian History 1500 - 1867**
*3 credits, 3 hours lecture*
This course is an introduction to Canadian History from the first Amerindian-European contacts in the 1500s to Confederation in 1867. Among the topics to be discussed are Aboriginal/White relations, English/ French relations, political and economic developments in the colonies of New France and British North America. This course provides a foundation for senior and advanced courses in Canadian history.

**HIST 261**
**An Introduction to the Study of Canadian History 1867 to the Present**
*3 credits, 3 hours lecture*
This course is an introduction to Canadian History from 1867 to the present. Among the topics to be discussed are Aboriginal/ White relations, French-Canadian nationalism, sectionalism, labour history as well as political, economic and social developments in Canada during this period. This course provides a foundation for senior and advanced courses in Canadian history.

**HIST 296**
**History of the Second World War**
*3 credits, 3 hours lecture*
This course explores many aspects of World War II that continue to engage military historians. Topics covered include the causes of the war; military weaponry and doctrine and their development throughout the war; significant air, sea, and land campaigns of the war; the aftermath and consequences of the war; and perspectives on the meaning and place of World War II in history.

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**HIST 303**
**Introduction to the History of Women**
*3 credits, 3 hours lecture*
This course is an introduction to the study of the history of women in the western world. It will examine the position of women in western societies from the Middle Ages to the present. Among the topics to be discussed will be women and revolution, women and religion, "les querelles des femmes" and the struggle for the vote.

**HIST 310**
**Canadian Environmental History**
*3 credits, 3 hours lecture*
This course examines Canadians' historical relationship to their environment. Various topics will be discussed, beginning with literature which charts 19th century environmental awareness in North America, Europe and the British Empire. In this setting, Canadian issues stemming from early European and Native contact, colonial industry, resource use, parks and conservation, ecofeminism, consumerism and postmodernism will be covered. Special attention will be given to understanding northern Alberta resource issues within this context.
*Prerequisite: A previous course in Canadian history or permission of the Program Chair*

**HIST 318**
**Medieval and Imperial Russia**
*3 credits, 3 hours lecture*
A study of the Russian people, state and culture from its origins to 1800, with emphasis on major institutional, social and ideological changes. This course deals with the origins of Russian history, the influence of Orthodox Christianity and the Tartar conquest, the establishment of autocracy and serfdom, and the westernization of Russia in the 17th and 18th centuries.

**HIST 339**
**The Second British Empire and Commonwealth Experience in the Nineteenth and Twentieth Centuries**
*3 credits, 3 hours lecture*
This course examines the history of the British Empire in the nineteenth and twentieth century, incorporating the colonies of settlement; the so-called dependant colonies of Africa, Asia and the Pacific; and, at times, the history of Great Britain itself. The course is organized to balance both metropolitan and colonial perspectives, and will cover themes and issues relevant to the political, economic, military, political, social and political history of the British Empire through decolonization after the Second World War.

**HIST 365**
**The Canadian West to 1885**
*3 credits, 3 hours lecture*
This course examines the history of the Prairie West from pre-contact times to 1885. It will include some discussion Northern history as well as the trans-mountain West. Topics to be discussed will include Aboriginal history, early exploration, the fur trade era, Riel and the Metis Nation and westward expansion.

**HIST 366**
**The Canadian West Since 1885**
*3 credits, 3 hours lecture*
This course examines the history of Canada, west of Ontario, from 1885 to the present. Various topics will be discussed such as the development of a regional identity in the West and the political traditions of the West.

**HIST 373**
**History of Atlantic Canada**
*3 credits, 3 hours lecture*
Survey of historical developments in the Atlantic region. The course will incorporate an interdisciplinary approach, with a view to understanding the culture(s) of the region. Through lectures and discussions, the various intellectual, social, political and economic strands that give identity to the region will be explored.

**HIST 374**
**French Canada to Confederation**
*3 credits, 3 hours lecture*
This course is designed to introduce students to the history of French Canada from the period of exploration and first contacts to Confederation. Various topics will be discussed from a French Canadian perspective including the society of New France, the conquest, the rebellion of 1837 and the French Canadian response to Confederation.

**HIST 375**
**French Canada Since Confederation**
*3 credits, 3 hours lecture*
This course introduces students to the history of French Canada from the time of Confederation to the present. Topics will include the conscription crises, the rise of Duplessis and the rise of the Parti Quebecois. These topics will be discussed from a French Canadian perspective.

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**HIST 397**
**History of Science I**
*3 credits, 3 hours lecture*
An introduction to the History of Science, from Ancient Greece to Newton, studies in its religious, political, social and economic contexts.

**INTD 100**
**Interdisciplinary Studies**
*3 credits, 3 hours lecture*
This course introduces students to the intellectual skills inherent in the arts and sciences, which equips students for employment and citizenship in a changing world. It also explores the intellectual skills, modes of thinking, and disciplinary diversity within the arts and sciences.

**JOB 005**
**Job Skills**
*2 credits, 2 hours lecture*
Students will learn how to do a job search, set goals, and research a variety of careers of interest to them. This course will help prepare AF students to complete the SDG career research investigation forms. These forms are needed to secure funding when moving from AF to College Preparation.

**LIF 005**
**Healthy Lifestyles**
*2 credits, 2 hours lecture*
Students will learn about the following topics:
- Budgeting and values
- Budgeting techniques
- Being a wise consumer
- Developing your own personal spending plan
- Using the Canada Food Guide to prepare and serve low-cost, nutritious meals
- Eating to suit your lifestyle and to create the body you want
- Accessing health resources
- Making positive lifestyle choices now so your body won't give out before its time.

**MATH 10C**
**Mathematics 10C**
*6 credits, 6 hours lecture*
Topics covered include linear SI metric and Imperial measurement and conversions; surface area and volume of 3D objects; right triangle trigonometry; apply the power laws with integral and rational exponents; perform all operations (addition, subtraction, multiplication, division) on polynomials; factor polynomials; identify, describe, interpret and analyze relations and functions; evaluate functional notation; determine domain and range; graph and define linear relations; solve linear system of two relations
*Alberta Education Course Equivalency: Math 10C*
*Prerequisite: AFM 009 or permission from the Program Chair*

**MATH 10-3**
**Mathematics 10-3**
*5 credits, 5 hours lecture*
The primary focus of this course is the development of spatial sense through direct and indirect measurement. Using imperial and metric units, fractions and decimals, students will describe the relationship among, and solve problems involving, length, area, volume, capacity, mass, temperature, angles, triangles and polygons, Students will also solve problems that require manipulation and application of formulas related to perimeter, area, primary trigonometric ratios, Pythagorean's theorem, income and unit pricing.
*Alberta Education Course Equivalency: Math 10-3*
*Prerequisite: AFM 009 or equivalent or permission from the Program Chair*

**MATH 20-1**
**Mathematics 20-1**
*5 credits, 6 hours lecture*
Topics covered include oblique triangle trigonometry; application of trigonometry and the unit circle up to 360; perform all operations (addition, subtraction, multiplication, division) on radicals and rational expressions, solve radical and rational equations; graph, analyze and apply quadratic functions; solve quadratic equations; solve systems involving both linear and quadratic equations; graph, analyze and solve linear and quadratic inequalities and absolute value functions.
*Alberta Education Course Equivalency: Math 20-1*
*Prerequisite: MATH 10, MATH 10C or MATH 20-2, or permission from the Program Chair*

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**MATH 20-2**
**Mathematics 20-2**
*5 credits, 6 hours lecture*
Topics covered include right angle trigonometry; applications involving rates and ratios (scale relationships of 2D and 3D shapes); manipulation and application of formulas; apply the power laws on integral and rational exponents; evaluate absolute values; perform all operations (addition, subtraction, multiplication, division) on radicals; solve radical equations; graph and apply quadratic functions; solve quadratic equations; spatial reasoning. Extensions to the core materials may include a Business Prep module involving the interpretation and analysis of statistical data and the utilization of inductive and deductive reasoning to prove conjectures and a Trades prep module for further exploration of 3D objects (model, draw, describe, scale diagrams, etc.) and the creation and interpretation of circle and line graphs.
*Alberta Education Course Equivalency: Math 20-2*
*Prerequisite: MATH 10, MATH 13, MATH 10 C or permission from the Program Chair*

**MATH 20-3**
**Mathematics 20-3**
*5 credits, 5 hours lecture*
This course further develops the concepts introduced in Math 10-3. The focus on the development of spatial sense through direct and indirect measurement is expanded to include the modeling and scale calculations of 3 dimensional objects. Problems and diagrams requiring the manipulation and application of formulas related to slope and rate of change are added to those of volume, capacity and surface area. Students create and interpret statistical data expressed within graphs, and they prepare budgets, credit calculations and compare services provided by financial institutions.
*Prerequisite: MATH 10-3 or MATH 10C*

**MATH 30-1**
**Mathematics 30-1**
*5 credits, 6 hours lecture*
Topics covered include the unit circle; graph, analyze and solve problems using the three primary trigonometric functions for angles expressed in radians and degrees; solve first degree trigonometric equations; prove trigonometric identities; perform operations on and composition of functions; analyze and perform translations on graphs of functions and related equations; logarithms; graph, analyze and solve polynomial functions; permutations, combinations and binomial theorem.
*Alberta Education Course Equivalency: Math 30-1*
*Prerequisite: MATH 20-1 or MATH 30-2 or permission from the Program Chair*

**MATH 30-2**
**Mathematics 30-2**
*5 credits, 6 hours lecture*
Topics covered include properties of angles and triangles; oblique triangle trigonometry; solve systems of linear equations; perform operations (addition, subtraction, multiplication, division) on rational expressions; solve rational equations; logarithms; numerical and logical reasoning. Extensions to the core materials may include a Business Prep module focusing on linear inequalities; probability; permutations, combinations and the fundamental counting principle and/or a Trades Prep module which explores measurement involving triangles, quadrilaterals and regular polygons, including transformations on 2D shapes or 3D objects.
*Alberta Education Course Equivalency: Math 30-2*
*Prerequisite: MATH 20-2 or MATH 20-1 or permission from the Program Chair*

**MATH 30-3**
**Mathematics 30-3**
*5 credits, 5 hours lecture*
The focus on the development of spatial sense introduces an understanding of the limitations of measurement tools in terms of precision, accuracy, uncertainty, and tolerance. Students perform translations, rotations, reflections and dilations on 2D and 3D models. Within the topic of linear relations, students demonstrate proficiency in graphing, formula manipulations, interpolation and extrapolation. Students critique the viability of small business options by considering expenses, sales and profit/loss statements. Statistical reasoning is developed through study of measure of central tendency and the analysis of probability.
*Alberta Education Course Equivalency: Math 30-3*
*Prerequisite: MATH 20-3*

**MATH 031**
**Calculus**
*5 credits, 6 hours lecture*
Topics covered include differential calculus of algebraic functions with applications to problems involving motion, rates of change, optimization and areas; vectors in the plane and in 3-space; matrix algebra; and solutions of systems of linear equations.
*Alberta Education Course Equivalency: Mathematics 31*
*Prerequisite: MATH 30-1 or permission from the Program Chair*

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**MATH 100**
**Calculus I**
*3 credits, 3 hours lecture, 2 hour lab*
4.0 Engineering units for the University of Alberta
This course covers rectangular and polar coordinates, analytic geometry, transcendental functions, limits, continuity, derivatives and applications, Taylor polynomials, integration and applications.
*Prerequisite: Math 30-1 and Math 31*
*NOTE: This course may not be taken for credit if credit has already been obtained in MATH 1113, or University of Alberta's MATH 114 or MATH 117. MATH 100 is restricted to Engineering students*

**MATH 101**
**Calculus II**
*3 credits, 3 hours lecture, 1 hour tutorial*
3.5 Engineering units for the University of Alberta
This course covers applications of integration to lengths, areas, volumes, and masses, inverse trigonometric and hyperbolic functions, methods of integration, polar and parametric equations, vector functions and derivatives.
*Prerequisite: MATH 100*
*NOTE: This course may not be taken for credit if credit has already been obtained in either MATH 1115 or University of Alberta's MATH 118. MATH 101 is restricted to Engineering students*

**MATH 102**
**Applied Linear Algebra**
*3 credits, 3 hours lecture, 1 hour lab*
3.5 Engineering units for the University of Alberta
This course covers vector and matrix algebra, systems of linear equations, vector geometry in the plane and in space, determinants, orthogonality and applications, eigenvalues and eigenvectors with applications, complex vector spaces. The course will also introduce students to the use of the computer algebra system MATLAB in solving problems in Linear Algebra.
*Prerequisite or Co-requisite: MATH 100*
*NOTE: This course cannot be taken for credit if credit has already been obtained in MATH 1120, or University of Alberta's MATH 125 or MATH 127. MATH 102 is restricted to Engineering students*

**MATH 1113**
**Elementary Calculus I**
*3 credits, 3 hours lecture, 1 hour lab*
This course is an introduction to the differential and integral calculus of algebraic functions of a single variable. Topics include limits and continuity of functions, techniques and applications of differentiation and definition and properties of the definite integral.
*Prerequisite: MATH 30-1*

**MATH 1115**
**Elementary Calculus II**
*3 credits, 3 hours lecture*
This course is an extension of Mathematics 1113, involving a study of the elementary transcendental functions and of further techniques and applications of integration. Topics include exponential and logarithmic functions, trigonometric and inverse trigonometric and further applications of integration, L'Hopital's rule and improper integrals.
*Prerequisite: MATH 1113*

**MATH 1120**
**Basic Linear Algebra I**
*3 credits, 3 hours lecture*
This course covers systems of linear equations, vectors in a n-space, vector equations of lines and planes, matrix algebra, inverses and invertibility, introduction to linear transformations, subspaces of n-space, determinants, introduction to eigenvalues and eigenvectors, the dot product and orthogonality, applications in a variety of fields, and numerical methods.
*Prerequisite: Math 30-1*
*NOTE: This course cannot be taken for credit if credit has already been obtained in any of MATH 102, or University of Alberta's MATH 125 or MATH 127*

**MATH 160**
**Higher Arithmetic**
*3 credits, 3 hours lecture*
This course is restricted to students of Elementary Education. It will provide them with an elementary introduction to Logic, Sets, Number Theory, Representations of Numbers, Number Systems, and Probability Theory.
*Prerequisite: Math 30-1, Math 30-2, or permission of the Program Chair*

**MATH 214**
**Intermediate Calculus I**
*3 credits, 4 hours lecture*
Topics include Infinite series, Taylor series, vectors, complex numbers, 2- and 3-dimensional analytic geometry; multivariate differential calculus, emphasizing the 2- and 3-dimensional cases; curves in 2-dimensions, and polar coordinates.
*Prerequisite: MATH 1115*

**MATH 215**
**Intermediate Calculus II**
*3 credits, 4 hours lecture*
Topics include: an introduction to ordinary differential equations; curves in 3-space; integration in 2- and 3-dimensions; polar, cylindrical, and spherical coordinates; line and surface integrals; Green's divergence and Stokes' theorems.
*Prerequisite: MATH 214*

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**MATH 260**
**Topics in Mathematics**
*3 credits, 4 hours lecture*
Problem solving in different areas of mathematics.
*NOTE: This course is intended for Education students and is not open to Science students.*
*Prerequisite: MATH 160 or teaching experience at elementary or junior high school level*

**MCT 111**
**General Education**
*60 hours*
This course provides a review of basic academic skills necessary for success in apprenticeship technical training. Students will develop independent study and research skills, use of SQ3R and time management techniques, review remedial grammar, punctuation, sentence structure, paragraph writing and report writing, and complete an apprenticeship trade career exploration research assignment. Students will further review the mathematics and science entrance level competencies necessary to ensure that entrance into any apprenticeship training program may be attainable.

**MCT 112**
**Personal Management**
*60 hours*
This course provides a review and understanding of health and safety issues, standards and employability dynamics related to industrial settings. Topics include OH&S legislation, Loss Management, Due Diligence, Employment Standards, Labour Relations and Workers Compensation legislation. The course further provides development of worksite communication, interpersonal and conflict resolution skills, an overview of Alberta Industry Training (apprenticeship) procedures, resume creation and interview techniques, drug and alcohol policies, industrial hygiene, management perspectives, and a systems perspective related to safety management and labour market dynamics. Additional topics include procedures for Manual Material Handling and a review of Fitness to Work issues. Certifications include Standard level First Aid + CPR, Shifting to Wellness, Fall Arrest and Aerial Platform, OSSA & CSTS and WHMIS.

**MCT 131**
**Electrical**
*60 hours*
This course provides an overview of the electrical trade and deals with electrical theory, related mathematics and physics. Emphasis is given to OHM's Law and understanding of series and parallel circuitry. Electrical safety, procedure and practices are applied in lab assignments dealing with low-voltage circuit construction and 120 V wire runs with switch, light, plug-in terminations.

**MCT 132**
**Blueprint Reading & Sketching**
*45 hours*
This course provides an overview blueprint reading and sketching such that students will be conversant with pictorial and multi- view drawings in all trade applications. Through sketching and drafting exercises, students become proficient in producing and interpreting third-angle projection orthographic and isometric pipe drawings. Included are fundamentals of dimensioning, elevations, cross-sections, circular features, scale, site plans, multi-trade construction drawings and mechanical drawings.

**MCT 137**
**Industry Placement**
*240 hours*
An apprenticeship industry placement of 240 hours completes the course offering of the MCTP Program. Trade designation for placement is made according to student choice. Placements are unpaid and subject to the normal policies, rules, procedures and performance expectations of hosting industry employers.
*NOTE: placement is subject to availability and may involve a gap in time between completion of in-house courses and industry placement*

**MCT 138**
**Welding**
*60 hours*
Welding involves the fusion of metal components through the application of heat. This course provides an overview of metal and allied trades specific to the use of welding and cutting techniques. Primary emphasis is given to welding safety, including safe work procedures, work conditions and related welding hazards. Lab practice focuses on SMAW (Shielded Metal Arc Welding) and oxyacetylene flame cutting. Topics include metal identification, mechanical and physical properties of metal, introduction to metallurgy and basic joints, types of welds, weld faults, power sources, and mild steel welding electrodes.

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**MCT 139**
**Mechanics**
*60 hours*
Mechanics relates to the maintenance, repair and overhaul of light and heavy vehicles and equipment, both self-propelled and towed, which may be used both on-road and off-road. This course provides an overview of HET and AST trades with basic theory related to engines, power transmission, drive trains, steering systems, suspension, electrical systems and alignment. Topics include the use of manuals and specifications, measurement and diagnostic tools, safe use of hand, electric and pneumatic tools. Particular attention is given to shop safety and safe use of hoisting equipment and jacks. Lab practice involves the use of testing equipment, vehicle inspection and performance of basic maintenance functions.

**MCT 140**
**Parts**
*15 hours*
In this course, Parts Technician, Materials and Parts, is used as a template to understand the procurement, flow, sale and dispersal of materials, parts and tools related to efficient business operations in all trade areas. Topics covered include shipping, receiving, Bill of Lading/ Waybill, stocking, security, catalogue use and customer service. Included are operation of powered/ non-powered material handling devices, manual material handling techniques and forklift operation (certification).

**MCT 141**
**Pipefitting/Plumbing**
*60 hours*
This course introduces students to the basic concepts and overview of the steamfitter/pipe-fitter/plumbing trades. Theoretical components include trigonometry/ geometry, safety, tools of the trade and an introduction to materials used in the trade. Hands- on components require the student to produce projects related to the theory portion of the course, including. Projects are completed with regard to safety and quality workmanship specific to tube bending, cooper soldering & layout, pipe threading, compression fittings & installation, and plumbing fixture installation. When complete, students have knowledge of basic concepts and skills which may be applied to a related pipe trade field environment.

**MCT 142**
**Millwright**
*60 hours*
Millwrights install, maintain, repair and troubleshoot stationary industrial machinery and mechanical equipment. This course provides an overview of bearing, coupling, clutch, packings/gaskets/seals, pumps, alignment, hydraulic and power transmission theory. Topics include fasteners, threading systems, accurate use of measurement, layout/ prints, hand tools and safe operation of metal fabrication rotating equipment. Equipment movement and hoisting is cover with emphasis on safe rigging theory and practice. Lab practice is a mechanical fabrication project.

**MCT 143**
**Carpentry**
*60 hours*
This program is designed to provide an understanding of basic carpentry and woodworking skills required to enter a carpentry apprenticeship. Students gain knowledge of woodworking machines, hand tools, safe working practices and become familiar with the materials and procedures needed to succeed in the field. Theoretical components include shop and work site safety, related mathematics, general construction code and layout, framed construction including, in particular, curved wall framing, straight and curved stair construction. Hands-on components include the use of layout, boring, cutting and fastening tools. Students acquire skills in the use of portable power saws, drills, drivers, routers, fastening tools in addition to the use of stationary power tools.

**MGTSC 312**
**Probability and Statistics for Business, Part II**
*3 credits, 3 hours lecture*
This course is the second part of an introduction to statistical analysis. Topics include statistical inference for the variance; statistical inference for the means, proportions and variances from two populations; analysis of variance; non-parametric statistics; joint probability distributions; marginal and conditional distributions; covariance, correlation and independence; contingency tables; simple, multiple and non-linear regression; and time series analysis.
*Prerequisite: MGTSC 301 and MATH 1120*

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**MICRB 265**
**General Microbiology**
*3 credits, 3 hours lecture, 3 hours lab*
This course will focus on the structure and physiology of free- living and pathogenic bacteria. The diversity of their metabolic activities, the interaction of microbes with their environment, symbiotic relationships and cell-to-cell communication are major topics. Lectures and laboratory exercises are coordinated to explore topics in basic microbiology, environmental microbiology, molecular microbiology, and the production of economically or medically important products through microbial biotechnology.
*Prerequisite: BIOL 107 and CHEM 161 or CHEM 164 or CHEM 261*

**MMI 133**
**Medical Microbiology for Nurses**
*3 credits, 3 hours lecture*
Introductory course in Microbiology designed specifically for students in the BScN Program. The course begins with basic information on microorganisms, the immune system, hospital hygiene, transmission of infection, infections, antimicrobials, disinfection and sterilization. The later part of the course concentrates on pathogenic organisms related to organ systems and how they cause disease.

**MUSIC 100**
**Introduction to Music**
*3 credits, 3 hours lecture*
A study of the elements of music and various musical styles with an emphasis on listening and analytical tools. Music covered includes folk, jazz, popular, music of other countries and a brief survey of the history of Western classical music. This course requires no previous musical training.

**NATST 100**
**Introduction to Native Studies**
*3 credits, 3 hours lecture*
This course will introduce the discipline and expectations of Native Studies to the student by emphasizing research and writing skills necessary in an academic environment. The subject matter for the course will come from such areas as the cultural histories and analysis of contemporary conditions of Native societies in Canada.

**NATST 110**
**Historical Perspectives in Native Studies**
*3 credits, 3 hours lecture*
A thematic introduction to the historical relationships, colonial contexts, and social, economic, political and cultural patterns that have shaped the contemporary situation of Aboriginal peoples in Canada.

**NATST 111**
**Contemporary Perspectives in Native Studies**
*3 credits, 3 hours lecture*
An introductory survey of current issues affecting Aboriginal peoples in Canada and their efforts to confront their colonial relationships with and within Canadian society.

**NATST 201**
**A Canadian Indigenous Prospective to Helping**
*3 credits, 3 hours lecture*
An analysis of Canadian welfare policy and the human services from an aboriginal perspective. The course emphasizes the linkage between practice and policy and overlays concepts such as colonization, decolonization, and approaches to practices which include cross culture, structure and anti-oppression in the context of Indigenous world views, experience and helping practices.

**NURSE 099**
**Nursing Skills & Safety Screen**
*5 credits, 3 hours seminar, 42 hours lab*
This course is mandatory for students who have failed a clinical course or the student who has left the Bachelor of Science in Nursing or Practical Nurse program for one academic year or more and wishes to return. In the lab setting, the student will simulate the nursing care of clients experiencing acute and complex variances in health in ambiguous, rapidly changing situations. Objective data will be collected through the observed structured nursing care for simulated patients utilizing selected levelled clinical scenarios. This data will be supplemented with examples of writing (learning goals, nursing care plan, patient research, charting and self-evaluation). Developed checklists for the skills chosen will be utilized to evaluate the skills component of this screen. In addition, the student will be required to write and pass a Medication Administration Safety Screen (MASS) prior to the lab skills evaluation. Students will be given two consecutive chances to successfully complete the Nursing Skills and Safety Screen course. If unsuccessful in both consecutive attempts, the student will be required to withdraw from the program. The student will not register in any nursing courses until successfully completing the Nursing Skills and Safety Screen course.

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**NURSE 113**
**Pathophysiology**
*3 credits, 45 hours lecture*
The focus is the application of human anatomy and physiology to the concepts of pathophysiology. Course content will be addressed within the context of underlying disease process and alterations in health.
*Pre-requisites: NURSE 117.*

**NURSE 114**
**Introduction to Nursing Theory I**
*5 credits, 39 hours lecture, 39 hours seminar, 26 hours lab*
Focus in the on the basic concepts of the nursing profession and discipline: nursing, person, health, and environment. These concepts will be explored within the context of primary health care and changing perspective of health and how this evolution has impacted the development of the profession of nursing. The philosophical, theoretical, historical, ethical and legal underpinnings of professional practice will be examined.
*Co-requisites: NURSE 117*

**NURSE 115**
**Pharmacotherapeutics in Nursing**
*3 credits, 33 hours lecture*
This course begins with an introduction to drug classification and regulation-from discovery to the patient. Pharmacodynamic and pharmacokinetic principles will be introduced. Four fundamental domains of drug movement and modification will be studied: drug absorption, distribution, metabolism, and excretion. To illustrate how the principles involved in Pharmacotherapeutics need to be incorporated into professional nursing practice; examples of prototypic drugs from each drug class will be used. Safe, evidence-based practice will be emphasized.

**NURSE 116**
**Introduction to Health Assessment**
*4 credits, 36 hours lecture, 36 hours lab*
Focus is on the health assessment of the well adult, with expected aging modifications. The course provides a beginning foundation of assessment skills and technologies necessary for determining client health status within the context of a nursing framework. Factors influencing lifestyles and personal health practices are included.
*Prerequisites: NURSE 117*
*Co-requisites: NURSE 113*

**NURSE 117**
**Anatomy and Physiology**
*6 credits, 6 hours lecture*
This course will introduce students to Anatomy, which is the study of the structure and relationships among structures; and Physiology which is the science that describes the normal function of living organisms with respect to the activities of tissues, organs, and systems. The central focus of the course is to illustrate and integrate structural principles and to build a fundamental knowledge and correlation between structure and function and of general system rules.

**NURSE 118**
**Anatomy and Physiology II**
*3 credits, 3 hours lecture*
This is a 3 credit Anatomy and Physiology course that is a continuation of Nurse 117. This course will continue to introduce students to Anatomy which is the study of the structure and relationships among structures; and Physiology which is the science that describes the normal functions of living organisms with respect to the activities of tissues, organs, structural principles and to build a fundamental knowledge of the correlation between structure and function and of general systems rules.

**NURSE 206**
**Introduction to Nursing Theory II**
*3 credits, 45 hours*
Focuses on health promotion and support to individuals in the pursuit of health throughout their lives A variety of concepts from nursing and other disciplines will be integrated into the overall learning. Students will be initiated into nursing roles with individuals in community, assisted living, and long term care facilities.
*Pre-requisites: All first year courses.*
*Co-requisites: NURSE 207, NURSE 115, NURSE 388*

**NURSE 207**
**Introduction to Nursing Practice**
*6 credits, 210 hours clinical*
This course introduces students to nursing practice. Practice focuses on individuals in community and long-term care settings.
*Pre-requisites: All first year courses*
*Co-requisites: NURSE 206, NURSE 115, NURSE 388*

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**NURSE 208**
**Mental Health Nursing Theory**
*6 credits; 18 hours lecture, 36 hours seminar, 18 hours lab*
Focus is on theory related to the promotion of mental health and the nursing care of people with acute and chronic alterations in mental health.
*Pre-requisites: All first year courses.*
*Co-requisites: NURSE 209, NURSE 115, NURSE 388*

**NURSE 209**
**Mental Health Nursing Practice**
*6 credits, 168 hours clinical*
Students will have the opportunity to apply concepts of mental health nursing to the care of individuals experiencing acute and chronic alterations in mental health in hospital and community settings,
*Pre-requisites: All first year courses.*
*Co-requisites: NURSE 208, NURSE 115, NURSE 388*

**NURSE 301**
**Nursing Research**
*3 credits, 38.5 hours lecture*
Introduction to the process of research through a comparative analysis of selected studies exemplifying different theoretical, methodological, and analytical approaches. Emphasis will be on the communicability of research, the needs of the research consumer, and the development of skills of critical appraisal.
*Prerequisite or Co-requisite: Statistic Elective*

**NURSE 307**
**Acute Care Nursing Theory I**
*6 credits, 26 hours lecture, 52 hours seminar, 39 hours lab*
The primary focus is the theoretical foundation for the client-centred care of adults and elderly clients and their families experiencing variations in health acute and chronic illnesses. Comprehensive assessment and best practice interventions are addressed within the context of a primary health care framework and nursing model.
*Pre-requisites: All first and second year courses.*
*Co-requisite: NURSE 308*

**NURSE 308**
**Acute Care Nursing Practice I**
*6 credits, 208 hours clinical*
The primary focus is the application of theory in the client-centred care of hospitalised adults and their families experiencing variations in health acute and chronic illnesses. Practice occurs primarily in primary, secondary, and tertiary acute care settings.
*Pre-requisites: All first and second year courses.*
*Co-requisites: NURSE 307*

**NURSE 309**
**Community Nursing Theory**
*6 credits, 26 hours lecture, 52 hours seminar, 26 hours lab*
Focus is on the philosophical and theoretical domains of nursing individuals, families and groups in the community across the lifespan. Students will also specifically explore theory related to the nursing care of the child-bearing family. Community nursing management and intervention consistent with the principles of primary health care will be explored and fostered.
*Pre-requisites: All first and second year courses.*
*Co-requisites: NURSE 310*

**NURSE 310**
**Community Nursing Practice**
*6 credits, 208 hours clinical*
Students will have the opportunity to apply concepts of community health nursing. Nursing practice will include health assessment and interventions with child-bearing families. Students will develop competence in both family and community assessments, the use of therapeutic communication skills, and the planning, implementation, and evaluation of community nursing interventions.
*Pre-requisites: All first and second year courses.*
*Co-requisites: NURSE 309*

**NURSE 388**
**Nursing Research and Statistics**
*6 credits, 70 hours lecture, 14 hours lab*
Students will be introduced to the process of research through a comparative analysis of selected students exemplifying different theoretical, methodological, and analytical approaches. Emphasis will be on understanding the research process, in knowing how to critically read, analyze, and begin to apply the knowledge gained from research in practice. Students will gain an understanding of descriptive and inferential statistics used in nursing research. Students will also examine trends and issues in developing evidence-based practice for the profession of nursing.

**NURSE 405**
**Acute Care Nursing Theory II**
*6 credits, 26 hours lecture, 52 hours seminar, 39 hours lab*
A comprehensive approach to primary health care components in the care of clients in complex situations locally, nationally, and internationally. High acuity health assessments and interventions are introduced. Case management, interdisciplinary collaboration, community development, and socio-political action are emphasized.
*Pre-requisites: All first, second and third year courses.*
*Co-requisites: NURSE 406, NURSE 407*

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**NURSE 406**
**Acute Care Nursing Practice II**
*6 credits, 208 hours clinical*
Professional nursing practice focuses on a comprehensive application of primary health care principles to clients experiencing acute variances in health across the lifespan. Practice will occur in primary, secondary, and tertiary level acute care settings.
*Pre-requisites: All first, second and third year courses.*
*Co-requisites: NURSE 405, NURSE 407*

**NURSE 407**
**Leadership and Issues in Nursing**
*3 credits, 45 hours*
Using the primary health care framework, a variety of professional, social, political and global issues affecting the nursing profession and Canadian health care system will be addressed. Key principles of leadership and management will also be addressed within the context of these issues.
*Pre-requisites: All first, second and third year courses.*
*Co-requisites: NURSE 405, NURSE 406*

**NURSE 490**
**Nursing in Context D**
*5 credits, 42 hours seminar, 21 hours lab*
A comprehensive approach to primary health care components in the care of clients in complex, ambiguous situations. Case management and multidisciplinary students may have the opportunity to lead a multidisciplinary student group skills will be emphasized.
*Pre-requisite: All first, second and third year courses.*
*Co-requisites: NURSE 491*

**NURSE 491**
**Nursing Practice VII**
*7 credits, 21 hours seminar, 14 hours lab, 26 hours clinical*
Management and care of clients in ambiguous, complex, situations occurring over a variety of settings.
*Pre-requisite: All first, second and third year courses.*
*Co-requisites: NURSE 491*

**NURSE 494**
**Nursing in Context D1**
*3 credits, 28 hours seminar, 12 hours lab*
Synthesis and focus of nursing knowledge and application of nursing research in a specific area of practice.
*Prerequisite: To enroll in this course, students must have passed all courses in their nursing program except NURSE 495*

**NURSE 495**
**Nursing Practice VIII**
*9 credits, 10 hour seminar, 34 hours clinical*
Comprehensive approach to professional practice of nursing in an area of special interest to the student.
*Prerequisite: NURSE 490, NURSE 491 and NURSE 494*

**NUTR 100**
**Nutrition and Wellbeing**
*3 credits, 3 hour lecture*
The course examines the fundamental principles of nutrition and the effects it has in society, athletic performance and physical education. It includes an analysis of practical and theoretical concepts of nutrition and the effects that dietary intake has on exercise, body composition and athletic performance.

**OA 107**
**Business Math & Microsoft Excel Specialist**
*2 credits, 4 hours lecture*
Students will complete practical mathematical application problems on topics such as percentages, invoices, merchandising and interest calculations. Through hands-on exercises, students are introduced to basic features and applications of a spreadsheet program. Using some of the more common worksheet and range commands, students develop and format worksheets containing various cell entries, formulas, and several built-in functions.
*Prerequisite: OA 110*

**OA 108**
**Accounting I**
*3 credits, 4 hours lecture*
Through hands-on experience and practical examples, students will develop a sound knowledge of the principles of accounting. Business simulations and business problems provide the students with the reinforcement necessary to fully understand and maintain the accounting records of a service business and a merchandising business organized as a partnership.

**OA 109**
**Computerized Accounting I**
*2 credits, 4 hours lecture*
Students will be introduced to the most commonly utilized accounting software in small business. Students will work with the accounting records of several different small businesses organized as sole-proprietorships and partnerships. Current payroll legislation will also be covered.
*Prerequisite: OA 108 or equivalent*

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**OA 110**
**Windows & File Management**
*1 credit, 5 hours lecture*
This is a foundation course in operating Windows and managing drives, files, and folders in a network environment using Windows Explorer. Students will also learn functions of a computer system, hardware and software components, e-mail and Internet features. This course provides a solid foundation for students to learn subsequent Windows applications.

**OA 118**
**Keyboarding I**
*2 credits, 4 hours lecture*
Students will master touch keyboarding including alphabetic and non-alphabetic parts of the keyboard. Keyboarding software is used to provide an individual diagnostic/prescriptive methodology as a means toward developing accuracy and increasing speed. Students will be required to spend time outside of class for practice.

**OA 119**
**Keyboarding II**
*2 credits, 3 hour lecture*
Students will use an individualized diagnostic/ prescriptive methodology as a means toward maintaining accuracy and increasing keyboarding speed. Keyboarding software will be utilized to enhance learning in the areas of technique perfection in keystroking, keyboard reinforcement, and rhythm development.
*Prerequisite: OA 118*

**OA 120**
**Business Communications I**
*3 credits, 5 hours lecture*
Good communication skills, more than any other factor, determine who gets the good job, who does that job well, and who gets the promotion. This course is designed to provide a firm foundation for effective business communications - both written and oral. Practical principles of grammar and punctuation will be mastered by the student. Spelling and vocabulary expertise is developed with emphasis placed on terminology used in today's electronic office.

**OA 122**
**Business Communications II**
*3 credits, 5 hours lecture*
Students will develop skills in oral and written communications and demonstrate these skills in the preparation of business correspondence, job search documents and interviews, customer service situations, oral presentations, and meetings. This course will take the student through the steps of planning and producing effective business memos and letters and will present strategies for overcoming common business-writing problems. A strong focus will be placed on the job search, including the resume, application letter, and interview.
*Prerequisite: OA 120 and OA 145*

**OA 133**
**On-The-Job Training**
*2 credits, 40 hours practicum*
Students are placed in a business setting for approximately four weeks. This enhances the students' formal training by providing an opportunity to apply newly acquired technical and administrative skills.
*Prerequisite: Successful completion of all Office Administration Certificate courses*

**OA 135**
**Human Relations In Business**
*2 credits, 4 hours lecture*
This course focuses on personality development for work. It is becoming increasingly evident that students need highly- developed human relations skills to be successful in the workplace. The course is designed to guide students through building and shaping their behaviour so that they get along effectively with others in a business environment. The necessity for and the development of teamwork skills is emphasized throughout the course. The importance of creative thinking and problem- solving skills for today's office professional is also stressed.
*NOTE: PLA not allowed for this course.*

**OA 136**
**Office Procedures**
*2 credits, 4 hours lecture*
The administrative support procedures for office tasks common to most offices today are presented. The topics covered will be reception duties; meetings, minutes, and conferences; telephone/ communications techniques; travel arrangements; distribution of information; sources business corporations.
*Prerequisite: OA 110*

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**OA 145**
**Microsoft Word & Document Preparation I**
*3 credits, 5 hours lecture*
OA 145 is an introductory course that is designed to develop a thorough understanding and proficient skills in basic word processing concepts and functions. Students will learn the step- by-step procedures for creating and editing a word processing document; move, copy, find and replace text; efficient keyboard and mouse techniques for moving the insertion point, changing the view within a document, and selecting text; linking document text, and utilizing proofing tools including the spelling, grammar, thesaurus, and autocorrect tools. Introductory concepts related to character, paragraph, and document formatting will also be covered. An emphasis will be placed on efficiency and accuracy in the preparation and printing of assignments.
*Co-requisite: OA 110 and OA 118*

**OA 146**
**Microsoft Word – Specialist & Document Preparation II**
*3 credits, 5 hours lecture*
Word processing software will be used to develop skills in document preparation. A varied selection of documents will be prepared including letters in several styles and lengths, memoranda, envelopes, basic reports with headings and subheadings, and tables in a variety of uses. Merge basics will be introduced and resumes will be prepared in a table format with the automated table feature. Students will also develop skills in utilizing resources including a reference manual, postal manual, and handouts as a guide to well formatted documents. An emphasis will be placed on the efficient and accurate preparation of mailable documents.
*Prerequisite: OA 118 and OA 145*

**OA 150**
**Medical Terminology**
*3 credits, 3 hours lecture*
This course is designed to provide students with the medical terminology necessary for employment in any medical oriented office. The students will learn the spelling and vocabulary of medical terms in preparation for transcription. Emphasis will be placed on anatomy, pharmacology, and psychology.

**OA 151**
**Medical Office Procedures**
*3 credits, 3 hours lecture*
This course introduces students to office procedures in a medically-oriented office. The students will learn how to: schedule and manage appointments, set up and maintain filing systems, properly fill out forms pertinent to a medical office, transcribe from taped materials, operate the provincial billing software.
*Prerequisite*: OA 150

**OA 162**
**Legal Office Procedures**
*3 credits, 3 hours lecture*
This introductory course is designed to familiarize the students with basic duties and procedures performed by a legal secretary. Students will obtain a working knowledge of simple legal documents and their use. As well, a comprehensive study in the area of wills and litigation. Topics covered are career qualifications, dealing with clients, legal style correspondence, law office files and record management, legal accounting and preparing legal instruments.
*Prerequisite: OA 145 or equivalent*

**OA 163**
**Legal Office Administration**
*3 credits, 4 hours lecture*
This course is designed to provide students with a comprehensive study in the area of estates, real estate and business corporations. Topics will include the preparation of all documents dealing with probating estates, real estate conveyancing, foreclosures and business corporations.
*Prerequisite: OA 162 and 40 wpm keyboarding speed*

**OA 164**
**Legal Work Placement**
*2 credits, 40 hours practicum*
Students are placed in a legal setting for approximately four weeks. This enhances the students' formal training by providing an opportunity to apply newly acquired technical and administrative skills.
*Prerequisite: Successful completion of all Office Administration Certificate courses including OA 162 and OA 163*

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**OA 170**
**Work Term I**
*9 credits, 40 hours practicum*
Work Term I is a mandatory four-month work placement for students enrolled in the first year of the Office Administration Co-op Education Diploma program. In this semester, students will be employed by a public or private sector organization to gain on-the-job-experience in industry. A contractual agreement between the student and the employer will form the basis for evaluation of the student's performance during the work term. In order to fulfill the course requirements, students will also be required to complete a formal work report at the end of the placement as well as meet with the Co-operative Education Coordinator/Instructor at least twice during the work term.

**OA 180**
**Microsoft Access**
*2 credits, 5 hours lecture*
This course deals with the management of information in business. The student will learn to design and manage electronic filing systems for various office environments. Records management using the Microsoft ACCESS database software is introduced. The student will learn fundamental database concepts and features, including designing, creating, and modifying database structures. Records will be sorted, selected, and reports generated.
*Prerequisite: OA 110*

**OA 208**
**Accounting II**
*3 credits, 3 hours lecture*
Students will be trained to design and set up a computerized accounting system. The focus of this course is the establishment and maintenance of all accounting functions in preparation for tax time. Other topics include exporting and integrating files, year-end adjustments, accounting for uncollectible accounts receivable, accounting for fixed assets, inventory evaluation methods, and depreciation.
*Prerequisite: OA 109*

**OA 209**
**Computerized Accounting II**
*3 credits, 5 hours lecture*
Students will be introduced to the world of corporate accounting. Through hands-on exercises students will become proficient in the operation of a large corporate accounting system including the System Manager, General Ledger, Accounts Receivable and Accounts Payable modules. Additional topics include accounting for investments, accounting for inventories and analysis and interpretation of financial statements.
*Prerequisite: OA 208*

**OA 215**
**Microsoft Word – Expert**
*3 credits, 3 hours lecture*
Students will learn advanced features of popular word processing software. Office tasks will be automated to increase efficiency through the use of auto text, fields, styles, macros, mail merge, outlines, indexes, templates and program customizing. Students will format formal reports and proposals.
*Prerequisite: OSWD 100, or OA 146 and OA 119*

**OA 216**
**Microsoft Excel – Expert**
*3 credits, 3 hours lecture*
Students will learn advanced features of popular spreadsheet software. Students will design and create functional spreadsheets which incorporate mathematical formulas and build-in functions. Students will also use macros, database functions, linking to automate tasks, and charting.
*Prerequisite: OSXL 100 or OA 107*

**OA 218**
**Desktop Publishing**
*3 credits, 3 hours lecture*
Students will utilize popular desktop publishing software to design layouts for various types of publications including newsletters, brochures and proposals. Text and graphics will be imported from a variety of word processing, spreadsheet, and graphics software to produce "camera-ready" publications.
*Prerequisite: OA 215 or equivalent*

**OA 219**
**Web Page Design**
*3 credits, 3 hours lecture*
Students will use specialized software to plan, design, develop, and maintain web home pages. Students will apply basic desktop publishing concepts to the layout and design of the web page. Hyperlinks, forms, graphics, and sound will be included. Basic HTML will be introduced, and students will learn terminology related to the Internet and web pages.
*Prerequisite: OA 146, OA 118, and OA 120 or equivalent*

**OA 220**
**Presentations & Microsoft PowerPoint**
*3 credits, 3 hours lecture*
Students will develop and present eff presentations. Emphasis will be placed on refined communication and presentation skills. Students will also learn to use a presentations software program to develop various displays for overhead transparencies and slides. Templates, builds, and transitions will be applied to slides to produce screen shows.
*Prerequisite: OA 122 and OA 146 or equivalent*

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**OA 221**
**Reports & Proposals**
*3 credits, 3 hours lecture*
Students will learn how to research, and write both formal and informal reports and proposals. Particular attention will be paid to structure, content, and language. The use of proofreading techniques, correct grammar, and Plain English concepts will be emphasized in all report-writing assignments. Students will also become familiar with a business plan as well as various formats for meeting minutes and agendas. This course concludes with an overview of job search techniques. Students will update their resumes and compile a professional portfolio.
*Prerequisite: OA 122 and OA 146 or equivalent*

**OA 231**
**Office Automation**
*3 credits, 3 hours lecture*
This course will examine the changes in technology that provide a foundation for electronic processing and integrated office systems. Students will integrate the Microsoft Office Suite applications to create professional quality documents and will integrate MS Office with the Internet. Also, students will learn to work within a network environment including proficiently communicating and organizing information using Microsoft Outlook.
*Prerequisite: OA 215, OA 216 and OA 280 or equivalent*

**OA 233**
**On-the-Job Training II**
*3 credits, 40 hours practicum*
This course gives students the opportunity to work full-time in a local business office for approximately four weeks. It provides for application of skills acquired in training, additional exposure to practical office standards, and reassessment of abilities and expectations. Students who are not employed in a related career while registered in the diploma program will be required to complete this course in order to graduate from the program.
*Prerequisite: Permission of the Program Chair*

**OA 234**
**Business Relations**
*3 credits, 3 hours lecture*
Business Relations is a human relations skills development course with a strong focus on the workplace. Course participants will have the opportunity to develop or further develop their interpersonal skills through the study of topics such as interpersonal style, effective listening, conflict resolution, leadership roles, supervision, motivation, stress management, and time management.
*Prerequisite: OA 135 or equivalent*

**OA 240**
**Industry Project**
*3 credits, 3 hours lecture*
This is a customized course designed to meet specific corporate training needs. The program chair will meet with the corporate client group to design the course. It is recommended that this course be offered near the end of the diploma program so that it can be used to ensure the diploma provides a comprehensive education.
*Prerequisite: Permission of the Program Chair*

**OA 245**
**Speedwriting & Transcription**
*3 credits, 3 hours lecture*
Students will develop speedwriting skills for the purpose of recording meeting minutes and taking notes. Students will also transcribe documents from their speedwriting notes.
*Prerequisite: OA 145 and OA 118 or equivalent*

**OA 280**
**Microsoft Access - Expert**
*3 credits, 3 hours lecture*
Students will learn advanced database features of popular database software. These features include designing and managing forms, tables, and reports; working with multiple queries; and creating and using macros and switch boards. Students will gain experience in electronic records management through a project-based approach to instruction.
*Prerequisite: OA 180 or permission of the Program Chair*

**PAC 111**
**Introduction to Basketball**
*3 credits, 1 hour lecture, 2 hours lab*
Acquisition of theoretical knowledge and personal skill in basketball.

**PAC 118**
**Introduction to Soccer**
*3 credits, 1 hour lecture, 2 hours lab*
PAC 118 is an introductory course designed to offer an introduction to the fundamental individual and team skills of soccer. The acquisition and understanding of these skills will be presented through activity and classroom sessions. The history, evolution and current status of soccer in Canada will also receive attention. A further focus will be the development of an understanding and application of basic strategies, positioning and rules of soccer. Physical performance and written assignments will be evaluated.

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**PAC 131**
**Badminton**
*3 credits, 1 hour lecture, 2 hours lab*
Acquisition of theoretical knowledge and personal skill in basic badminton strokes and strategies is covered in this course.

**PAC 137**
**Volleyball**
*3 credits, 1 hour lecture, 2 hours lab*
Acquisition of theoretical knowledge and personal skill in the fundamental skills of volleyball is covered. Students will be taught in individual and small group settings.

**PAC 144**
**Resistance Training**
*3 credits, 3 hours lab*
An introduction to leadership principles in resistance training. Acquisition of theoretical and practical knowledge using various forms of resistance training. Emphasis will be based upon providing the student with leadership skills in resistance training techniques, lifting mechanics, program design and implementation

**PAC 145**
**Golf**
*1.5 credits, 1 hour lecture, 2 hours lab*
Acquisition of theoretical knowledge and personal skill in driving, chipping, pitching, and putting is covered. Students must provide their own equipment.

**PAC 156**
**Yoga for Beginners**
*3 credits, 3 hours lab*
This course will introduce students to yoga and the basic postures (asanas) and breathing techniques (pranyama) performed within this discipline. Students will learn how yoga strengthens the body, mind, spirit connection while promoting positive overall health and wellness. Students will be introduced to over 70 asana and numerous breathing techniques. In addition, students will become familiar with the history of yoga and the different schools within the discipline. Adapting yoga asana, pranyama, and class structure to accommodate specific populations (seniors, athletes, children and persons with developmental delays/ disabilities) will also be covered.

**PAC 311**
**Analysis and Instruction of Basketball**
*3 credits, 3 hours lecture*
The theory, practice and teaching of the fundamental skills of basketball.
*Prerequisite: PAC 111*

**PAC 318**
**Analysis and Instruction of Soccer**
*3 credits, 3 hours lab*
PAC 318 provides the theory, practice, and teaching of the fundamental skills of soccer. Emphasis is on student acquisition of knowledge and physical skill related to the tactful play of soccer. Evaluation focuses on both assessment of physical performance and theoretical understanding.
*Prerequisite: PAC 118 or permission of Program Chair*

**PAC 337**
**Analysis and Instruction of Volleyball**
*3 credits, 1 hour lecture, 2 hours lab*
The primary objective is to introduce the student to the study of fundamental technique, team tactics and principles of instruction in the game of volleyball.
*Prerequisite: PAC 137*

**PACE 001**
**Communication & Conflict Management Skills**
*8 credits, 8 hours lecture*
Students in PACE 001 will develop questioning skills, attending behaviours and the ability to appropriately express their feelings in a formal school setting, identify assumptions, and give and receive feedback. As well, students will learn the basics of conflict management in a multicultural class or workplace setting and how to disagree in a positive manner. Students will learn to negotiate with peers and those in authority to resolve arguments. Assertiveness training, anger management and self-esteem building will be included.

**PACE 002**
**Academic Survival Skills**
*8 credits, 8 hours lecture*
Students will develop time management proficiency, SQ3R techniques, test taking, and anxiety controls, note-taking and research expertise. As well, the students will learn how to set priorities, do a time studies analysis, develop and use day plans and lists effectively, and manage stress. A customized math and English refresher and an introduction to computers is included. Individualized academic remediation with Computer Assisted Instruction and tutor support is available.

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**PACE 003**
**Critical Thinking and Problem Solving**
*7 credits, 7 hours lecture*
Students in PACE 003 will develop an understanding of critical thinking and how to apply it to their lives as students and future employees. Topics will include: knowing your attitudes and values, knowing your mental habits, the characteristics of critical thinkers, how to recognize errors in thinking, how to evaluate ideas, and how to apply critical thinking.

**PACE 004**
**Academic and Career Planning**
*7 credits, 7 hours lecture*
Students in PACE 004 will develop their ability to identify personal interests, and to set, classify, justify and evaluate goals. As well, students will explore the variety of potential careers and training currently available in the region and develop long range action plans on how to reach their vocational goal.

**PAPHY 105**
**Pathophysiology**
*3 credits, 45 hours lecture*
Pathophysiology is a theory course in the basic sciences. This pathophysiology course examines the pathological processes underlying disease and focuses on common disorders in the body system Disorders related to the systems of the body will be discussed in terms of manifestations, etiology, and complications. The diagnosis and medical management of common disorders in each body system will also be discussed.
*Prerequisites: ANPH 100 and ANPH 101*

**PAR 005**
**Parenting Skills**
*2 credits, 2 hours lecture*
Students will learn about: children's physical development and home safety, children's health, parental needs and self-esteem, children's intellectual development, love and discipline, coping with pressures facing modern parents, developing their own parenting style, increasing self-esteem of parent and child, dealing with misbehaviours, effective communication styles, preventing and solving problems.

**PCARP110**
**Building Materials**
*1 credit, 15 hours*
This section will introduce students to common types of solid woods and manufactured construction products. Students will learn not just about the building materials, but also the glues and fasteners commonly used with them, as well as an introduction to concrete as a building material.

**PCARP120**
**Hand and Power Tools**
*5 credits, 80 hours*
In this course students will identify and describe common woodworking tools and their safe use. Tools include small hand tools, portable electric power tools and larger stationary power tools. Tools include but not limited to hand planes, hand boring tools, portable circular saw, router, table saw, jointer, planner and drill press.

**PCARP130**
**Site Preparation and Foundation**
*3 credits, 46 hours*
This section will explain preliminary building operations required prior to the footings being placed. It will identify and describe optical leveling equipment, light and heavy earth moving and leveling equipment used on construction sites. Students will learn the types, design and placement of concrete footings, foundations and slabs for light construction. Students will explore conventional, wood and alternate foundation systems. It covers site preparation to backfill including the forming to the placement of rebar and anchor bolts.

**PCARP140**
**Floor Frame**
*1 credit, 20 hours*
This section will explain how loads transfer from floor systems to foundations as well as the design and construction of beams in residential construction. It includes layout construction of traditional and engineered floor systems. Students will become proficient with building code as they pertain to residential floor systems.

**PCARP150**
**Estimating and Plans**
*4 credits, 64 hours*
This section will introduce students to basic drawing instruments and their use such as sketching orthographic and isometric projections of various shapes, describing isometric angles, page layout and centering techniques. Students will learn how to navigate between the different views in a set of blueprints using common symbols and abbreviations. This section will also include the calculation of materials required for conventional concrete foundations and residential floor systems.

**PCARP199**
**Work Site Placement**
*4 credits, 240 hours*
Six week paid work experience with industry.

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**PECO 3100**
**Applied Science**
*4 credits*
Topics include applied math, applied mechanics, thermodynamics, and applied science as identified in the Alberta Boilers Safety Association Reference Syllabus for the first paper of 3rd Class Part A Power Engineering.

**PECO 3200**
**Plant Services**
*4 credits*
The course covers industrial legislation, codes, boiler calculations, fuels and combustion, piping, electro technology, electrical calculations, control instrumentation and fire prevention and plant safety as identified in the Alberta Boilers Safety Association Reference Syllabus for the second paper of 3rd Class Part A Power Engineering.

**PECO 3300**
**Steam Generation**
*4 credits*
Topics covered are boilers, boiler control systems, heating and air conditioning, feed water treatment, pumps, and welding as identified in the Alberta Boilers Safety Association Reference Syllabus for the first paper of 3rd Class Part B Power Engineering.
*Prerequisite: Completion of 3rd Class Part A theory or 3A ABSA*

**PECO 3400**
**Prime Movers and Auxiliaries**
*4 credits*
This course covers prime movers, air compressors, refrigeration and lubrication as identified in the Alberta Boilers Safety Association Reference Syllabus for the second part of 3rd Class Part B Power Engineering.
*Prerequisite: Completion of 3rd Class Part A theory or 3A ABSA.*

**PECO 3500**
**Work Experience**
*12 credits*
Six month paid work placement with industry.
*Prerequisite: Completion of all 3rd Class course work.*
*NOTE: Work placement may be outside Wood Buffalo Region.*

**PECO 4100**
**Applied Science**
*4 credits*
Topics include applied mathematics, elementary mechanics and dynamics, elementary thermodynamics, mechanical drawing, administration, industrial legislation, workplace hazardous materials, plant safety and plant fire protection as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part A Power Engineering.

**PECO 4200**
**Plant Services**
*4 credits*
Areas covered are environment, material and welding, piping and valves, high pressure boiler design, high pressure boiler parts and fittings, high pressure boiler operation and feed water treatment as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part A Power Engineering.

**PECO 4300**
**Steam Generation**
*4 credits*
Course includes prime movers and engines, pumps and compressors, lubrication, electricity, controls, instrumentation and computers, heating boilers, and heating systems as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part B Power Engineering.
*Prerequisite: Completion of 4th Class Part A theory or 4A ABSA*

**PECO 4400**
**Prime Movers & Auxiliaries**
*4 credits*
Topics include heating boiler and heating system controls, auxiliary building systems, vapour compression refrigeration, absorption refrigeration, air conditioning, air conditioning systems, boiler maintenance and types of plants as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part B Power Engineering.
*Prerequisite: Completion of 4th Class Part A theory or 4A ABSA*

**PECO 4500**
**Work Experience**
*12 credits*
Six month paid work placement with industry.
*Prerequisite: Completion of all 4th Class course work.*
*NOTE: Work placement maybe outside Wood Buffalo Region*

**PEDS 100**
**Human Anatomy**
*3 credits, 3 hours lecture, 2 hours lab*
Introductory study of human anatomy. Students learn structural and functional components of selected systems of the human body.

**PEDS 101**
**Essentials of Human Physiology**
*3 credits, 3 hours lecture*
The course provides an introduction to human physiology from cellular to systemic level, with special emphasis on systems which adapt to exercise stress.
*NOTE: Credit will be granted for only one of PEDS 101 or 102*

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**PEDS 103**
**Integrative Human Physiology**
3 credits, 3 hours lecture
Introduction to Integrative Human Physiology focuses on the regulation, control, and integration of cellular functions in the human body with special emphasis on systems that respond to exercise stress.
*Prerequisite: PEDS 101.*
*NOTE: Credit will be granted for only one of PEDS 102 or 103*

**PEDS 200**
**Physiology of Exercise**
*3 credits, 3 hours lecture, 2 hours lab*
An introduction to physiological adaptations to the stress of exercise and training.
*Prerequisite: PEDS 101*

**PEDS 203**
**Skill Acquisition and Performance**
*3 credits, 3 hours lecture*
This course presents a psychological approach to understanding human motor behaviour. The course examines the processes involved in learning motor skills and controlling movement, and the factors that influence acquisition and performance.

**PEDS 206**
**Biomechanics**
*3 credits, 3 hours lecture*
An introduction to the biomechanics of human movement. A qualitative approach is used in the study of key biomechanics concepts and principles as they are applied to sport and exercise.
*Prerequisite: PEDS 100*

**PEDS 207**
**Physical Growth & Psychomotor Development**
*3 credits, 3 hours lecture*
A study of the sequential changes in physical growth and motor development with emphasis on individual differences.
*NOTE: Credit will be granted for only one of PED207 or PED307*

**PEDS 209**
**Research Methods in Kinesiology**
*3 credits, 3 hours lecture*
An overview of research in kinesiology with emphasis on practical application of research techniques and designs.
*Prerequisite: STAT 141 or 151*

**PEDS 240**
**Introduction to Sports Injury Management**
*3 credits, 3 hours lecture, 2 hours lab*
The course allows an analysis of Practical and theoretical concepts of sports injuries. It includes an overview of sports medicine, care and prevention of injuries, and safety in athletics and physical education.
*Prerequisite: PEDS 100*

**PEDS 294**
**A Conceptual Approach to Physical Activity**
*3 credits, 3 hours lecture*
This course is an exploration of the principles and concepts that underlie movement of individuals and groups in a variety of settings. The focus of the course is on the development of a conceptual understanding of movement; therefore, a wide range of activities and their contexts will be examined and experienced.
*NOTE: Credit will be granted for only one of PAC 101 or PEDS 294*

**PEDS 303**
**Psychology of Sport & Physical Activity**
*3 credits, 3 hours lecture*
This course introduces the student to select psychological theory as it relates to sport and physical activity. Psychological constructs along with their theoretical perspectives will be viewed within a cognitive, emotional, and behavioural framework. An analytical approach is encouraged.

**PEDS 311**
**Assessment of Fitness and Health**
*3 credits, 3 hours lecture, 2 hours lab*
Students will gain knowledge in fitness, health and research appraisal. Emphasis will be given to validity and reliability of various assessments and factors involved in the assessment of performance and health assessment.
*Prerequisites: PEDS 200 or STAT 141 or 151*

**PELEC 110**
**Circuit Fundamentals**
*5 credits, 80 hours*
Students will acquire a foundation of knowledge covering composition of matter, current, voltage and resistance. This course will explore the characteristics of conductors, series and parallel resistive circuits. An understanding of the interrelation between work, energy, power and efficiency will be discussed. Students will also learn to connect and analyze an Edison 3-wire system.

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**PELEC 120**
**EMF Sources**
*2 credits, 25 hours*
This course covers EMF sources and topics will include cells, batteries, magnetism, electromagnetism, electromagnetic induction and generators.

**PELEC 130**
**Equipment Fundamentals**
*4 credits, 60 hours*
Students will cover safe handling and operation of meters, circuits, conductors and resistors, splicing and terminating, relays and controls. Residential alarm systems and smoke detectors are also covered.

**PELEC 140**
**Electrical Code Part 1 and Blueprints**
*4 credits, 60 hours*
Students will cover part 1 of the Canadian Electrical Code which will differentiate and emphasize the importance of the code in the Electrical Industry. A greater understanding of the Alberta apprenticeship program is also acquired. Identification of symbols and interpretation of blue print reading, diagram and schematic drawings are emphasized.

**PELEC 199**
**Work Site Placement**
*4 credits, 240 hours*
Six week paid work experience with industry.

**PELM 3100**
**Applied Science**
*4 credits*
Topics include applied math, applied mechanics, thermodynamics, and applied science as identified in the Alberta Boilers Safety Association Reference Syllabus for the first paper of 3rd Class part A Power Engineering.

**PELM 3200**
**Plant Services**
*4 credits*
The course covers industrial legislation, codes, boiler calculations, fuels and combustion, piping, electro technology, electrical calculations, control instrumentation and fire prevention and plant safety as identified in the Alberta boilers Safety Association Reference syllabus for the second paper of 3rd Class Part A Power Engineering.

**PELM 3300**
**Steam Generation**
*4 credits*
Topics covered are boilers, boiler control systems, heating and air conditioning, feed water treatment, pumps, and welding as identified in the Alberta Boilers Safety Association Reference Syllabus for the first paper of 3rd Class Part B Power Engineering.
*Prerequisite: Completion of 3rd Class Part A theory or 3A ABSA*

**PELM 3400**
**Prime Movers & Auxiliaries**
*4 credits*
This course covers prime movers, air compressors, refrigeration and lubrication as identified in the Alberta Boilers Safety Association Reference Syllabus for the second part of 3rd Class Part B Power Engineering.
*Prerequisite: Completion of 3rd Class Part A theory or 3A ABSA*

**PELM 4100**
**Applied Science**
*4 credits*
Topics include applied mathematics, elementary mechanics and dynamics, elementary thermodynamics, mechanical drawing, administration, industrial legislation, workplace hazardous materials, plant safety and plant fire protection as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part A Power Engineering.

**PELM 4200**
**Plant Services**
*4 credits*
Areas covered are environment, material and welding, piping and valves, high pressure boiler design, high pressure boiler parts and fittings, high pressure boiler operation and feedwater treatment as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part A Power Engineering.

**PELM 4300**
**Steam Generation**
*4 credits*
Course includes prime movers and engines, pumps and compressors, lubrication, electricity, controls, instrumentation and computers, heating boilers, and heating systems as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part B Power Engineering.
*Prerequisite: Completion of 4th Class Part A theory or 4A ABSA*

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**PELM 4400**
**Prime Movers & Auxiliaries**
*4 credits*
Topics include heating boiler and heating system controls, auxiliary building systems, vapour compression refrigeration, absorption refrigeration, air conditioning, air conditioning systems, boiler maintenance and types of plants as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part B Power Engineering.
*Prerequisite: Completion of 4th Class Part A theory or 4A ABSA*

**PEMP 100**
**Employability Skills**
*2 credits*
This course is designed to provide students with the essential skills necessary to seek, obtain and maintain employment in their relevant field. Topics will include Canadian Employment Standards, Labour Relations and Workers Compensation. Students will acquire the knowledge to effectively communicate in the workplace and conflict resolution methods. Creation of a marketable resume and cover letter in addition to interview strategy techniques.

**PEMP 101**
**Trades Mathematics**
*2 credits*
This course will provide an overview of metric and imperial systems, basic mathematic functions including fractions, ratios, proportions, percentages, exponents, algebra, trigonometry and logarithms.

**PEMP 102**
**Trades Science**
*2 credits*
This course will provide an overview of simple machines, properties of matter, air and water. Topics also include review of energy and motion, temperature and heat, magnetism and electricity.

**PEMP 103**
**Technical Communication**
*2 credits*
An introduction to the concepts of technical communication and report writing. Topics of significance for technical writing such as, summaries, technical definitions and descriptions, process descriptions, instructions and report writing.

**PEMP 104**
**Safety**
*1 credit*
This course will provide students with an understanding and knowledge of the OH&S legislation, regulations and practices intended to ensure a safe work place, understand the use of PPE and safe practices for climbing, lifting, rigging and hoisting. Hazardous materials and fire protection will also be covered.

**PERLS 104**
**Introduction to Sociocultural Aspects of Leisure and Sport**
*3 credits, 3 hours lecture*
The study of play, physical education, recreation, sport, and leisure as institutionalized ways in which society organizes and teaches attitudes and skills. Provides an introduction to the importance of sociocultural inquiry and the notion of being critical as an empowering process.

**PERLS 105**
**Introduction to Sport Administration**
*3 credits, 3 hours lecture, 1 hour lab*
Provides students with an introduction to the management concepts required to successfully administer a sport, recreation or physical activity.

**PERLS 204**
**Canadian History of Leisure, Sport & Health**
*3 credits, 3 hours lecture*
An examination of the significant changes which have occurred in leisure and sport specifically over the last century and with particular reference to Canadian society.
*Pre-requisite: PERLS 104*

**PERLS 207**
**Physical Activity and Leisure for Special Populations**
*3 credits, 3 hours lecture, 1 hour lab*
This course provides an introduction to research, theory and practice related to the participation of persons with disabilities in physical activity settings (e.g., sport, exercise, physical education, recreation). It includes consideration of topics such as the importance of participation in physical activities for persons with disabilities, the impact of beliefs and attitudes toward persons with disabilities in physical activity settings, examination of current issues and topics such as appropriate terminology and language, inclusion, disability sport, and advances in research. The course also includes a survey of selected disabilities or differences and consideration for their implications for performance and participation in physical activity settings.

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**PESS 293**
**Introduction to the Movement Activities of Children Aged 5 – 12**
*3 credits, 3 hours lecture*
A study of play and other movement activities including games, gymnastics and dance for children will be covered.

**PHARM 130**
**Basic Pharmacotherapeutics**
*3 credits, 45 hours lecture*
The Pharmacology course provides the basic scientific knowledge required for the safe administration of medications. The course focuses on the therapeutic physiological effect of medications in treating clients across the lifespan. Content includes common classification of drugs and their action, therapeutic effect, routes, side effects and reactions. Common medications are cited tor each drug classification. Herbal preparations are also introduced. This is a theory course.
*Pre-requisite: ANPH 100 and ANPH 101*

**PHIL 101**
**Introduction to Philosophy: Values and Society**
*3 credits, 3 hours lecture*
This course provides the student with an introduction to the perennial problems of philosophy through the study and critical discussion of selected classical and modern works. The aim of this course is twofold. The student will be introduced to the domain and method of philosophical inquiry. More specifically the student will examine in some detail the areas of ethics and politics. In these areas the relationship between individuals and individuals and society will be highlighted.

**PHIL 102**
**Introduction to Philosophy: Knowledge and Reality**
*3 credits, 3 hours lecture*
This course provides the student with an introduction to the perennial problems of philosophy through the study and critical discussion of selected classical and modern works. The aim of this course is twofold. The student will be introduced to the domain and method of philosophical inquiry. More specifically the student will examine in some detail the areas of epistemology and metaphysics. Epistemology is concerned primarily with the nature of knowledge and metaphysics is concerned with the nature of reality.

**PHIL 120**
**Symbolic Logic I**
*3 credits, 3 hours lecture*
A study of sentential logic, including translation, semantics, decision procedures and natural deduction followed by an introduction to predicate logic, concentrating on translation.
*NOTE: Not open to students with credit in PHIL 220*

**PHIL 125**
**Practical Logic**
*3 credits, 3 hours lecture*
Practical Logic refers to the elementary methods and principles for analyzing, evaluating and constructing arguments. The course will focus on theory, explaining the core concepts and theoretical tools necessary for proper philosophical reasoning. This theoretical study will provide an introduction to formal notation, syllogisms, informal fallacies, definitions and common argument forms. The course will also include instruction in the practical use of logic by explaining the skills and procedures used in sound argumentation. This practical exercise will provide basic instruction in writing arguments, evaluating media and applying diagnostic methods to reasoning as it occurs in contemporary debates.

**PHIL 160**
**Contemporary Moral Issues**
*3 credits, 3 hours lecture*
This course is an introduction to the elementary principles and methods of moral philosophy. An understanding of ethical theory will provide a foundation for discussion of contemporary moral issues. The objectives of the course are to provide the student with an understanding of the ethical theories which ground Western moral intuition and tradition, an appreciation of the methods employed by philosophers with respect to ethical controversies, an ability to critically assess moral arguments, and the skills needed to express moral arguments in oration, interactive dialogue and written essay.

**PHIL 200**
**Metaphysics**
*3 credits, 3 hours lecture*
This course examines basic questions concerning the nature of reality. Topics may include existence, materialism and idealism, freedom and determinism, appearance and reality, causality, identity, time and space, universals and particulars.

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**PHIL 205**
**Philosophy of Mind**
*3 credits, 3 hours lecture*
This course is designed as an introduction to the central issues in the philosophy of mind. Topics to be considered include consciousness, self-knowledge, models of the mind, the mind-body problem, behaviourism and artificial intelligence.

**PHIL 215**
**Epistemology**
*3 credits, 3 hours lecture*
This course is designed to provide students with an adequate grounding in the central issues of epistemology, including such topics as the definition of knowledge, skepticism and the limits of human knowledge, the role of perception, memory, and reason as sources of human knowledge, relativism, truth, and the objectivity of knowledge. These and other epistemological issues will be studied through a close reading of three classic inquiries, Plato's Theaetetus, Russell's Problems, and Plantinga's Warrant. Each of these texts contains deep and abiding insights into the central epistemological question, "What is knowledge?" Students will be required to read difficult text, engage in philosophical seminar discussions and express their ideas through critical response essays.

**PHIL 217**
**Biology, Society and Values**
*3 credits, 3 hours lecture*
This course focuses on the philosophical and social impact of historical and contemporary topics in the biological sciences. Topics may include genetic engineering, human cloning, the social impact of the theory of evolution and other relevant issues.

**PHIL 230**
**Greek Philosophy to Plato**
*3 credits, 3 hours lecture*
This course will involve a survey of the thought of the ancient Greek world, which is the foundation of philosophy in the West. The course will cover the Pre-Socratics, Socrates and Plato. Topics may include the nature of reality, human happiness and ethics, whether knowledge is possible, whether the soul is immortal and other relevant issues.

**PHIL 240**
**Descartes to Hume**
*3 credits, 3 hours lecture*
This course is a survey of the main philosophical trends that occurred in the 17th and 18th centuries in European philosophy. Philosophers to be studied include Rene Descartes, John Locke, Gottfried Leibniz, Benedicto Spinoza and David Hume. By studying these figures students will become familiar with some of the key figures and knowledge that shaped the modern world.

**PHIL 250**
**Contemporary Ethical Issues**
*3 credits, 3 hours lecture*
An examination of ethical questions of right and wrong, good and evil, and application of ethical theories to practical issues.

**PHIL 265**
**Philosophy of Science**
3 credits, 3 hours lecture
This course is designed as an introduction to the central issues in the philosophy of science. Topics may include the problem of induction, demarcating science and non-science, the logic of discovery and justification in science, paradigm shifts and theory change, and the role of science in society.

**PHIL 270**
**Introduction to Political Philosophy**
*3 credits, 3 hours lecture*
This course introduces the student to the study of political philosophy. It will concentrate on such central figures in the history of political philosophy such as Plato, Aristotle, Hobbes, Locke, Rousseau, and Marx. Topics include the nature of justice, the nature and justification of political obligation, freedom and authority, and the social contract.

**PHIL 317**
**Philosophy of Biology**
*3 credits, 3 hours lecture*
This course focuses on core topics where the information provided by biology contributes to issues in philosophy. This can include topics such as issues in epistemology and the philosophy of science, the social repercussions of biological discoveries, and the application of biological theories to social issues.

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**PHIL 333**
**Aristotle and Hellenistic Philosophy**
*3 credits, 3 hours lecture*
This course focuses on the various philosophical theories that emerged from Aristotle to the Roman period. Theoretical positions to be considered include Aristotelianism, Stoicism, Epicureanism, Pyrrhonianism and neo-Platonism. Issues to be considered include the nature of knowledge, the good life, and the nature of reality.

**PHIL 355**
**Environmental Ethics**
*3 credits, 3 hours lecture*
This course focuses on issues that arise due to our relationship with the environment. Topics to be considered may include the debate between anthropocentrism, psychocentrism and ecocentrism; climate change; private versus public solutions to environmental issues; and genetically modified foods.

**PHIL 357**
**Philosophy of Religion**
*3 credits, 3 hours lecture*
This course focuses on various topics in the philosophy of religion. These topics may include religious pluralism, proofs of God's existence, the problem of evil, the meaning and intelligibility in religious language, and religion and morality.

**PHIL 375**
**Science and Society**
*3 credits, 3 hours lecture*
This course is a broadly based introduction to the intellectual, cultural and social dimensions of science and their implications. Topics may include the impact of the Newtonian revolution, mechanism, materialism and Darwinism, the values of science, and the social aspects of science.

**PHIL 382**
**Philosophy of Law: Social Issues**
*3 credits, 3 hours lecture*
This course is an introduction to the philosophic study of law with particular emphasis upon the interconnectedness of law and morality. The course will investigate philosophical problems arising at the interface between the legal system and wider social life: problems of legal liability (harm as the limit of legal liability, legal paternalism, legal moralism), the nature of legal liability/responsibility (the mental element in legal liability), civil disobedience, punishment, and censorship.

**PHIL 386**
**Philosophy of Health Care**
*3 credits, 3 hours lecture*
This course involves a philosophical examination of various issues in health care. Topics may include rights to abortion, passive versus active euthanasia, research on human subjects, multi-tier versus single tier health care, allocation of medical resources, confidentiality, and consent.

**PHYS 025**
**Physics 025**
*6 credits, 6 hours lecture*
Main topics include triangle trigonometry, vectors and vector diagrams, space body diagrams, relative velocity, uniform acceleration, Newton's three laws, inclined planes, pulley systems, friction, work, power, energy, circular motion, interaction between bodies, and introduction to waves.
*Alberta Education Course Equivalency: Physics 10 and Physics 20*
*Prerequisite: MATH 10C or equivalent or permission from the Program Chair*

**PHYS 030**
**Physics 030**
*5 credits, 6 hours lecture, 2 hours lab on alternate weeks*
A review of Physics 025, followed by the study of electric and magnetic fields, electromagnetic radiation, and conservation of energy.
*Alberta Education Course Equivalency: Physics 30*
*Prerequisite: PHYS 025 or equivalent or permission from the Program Chair*

**PHYS 114**
**The Universe from a Modern Perspective**
*3 credits, 3 hours lecture*
This course is a qualitative survey of some of the interesting topics in modern physics. The concepts of physics are presented without the mathematical constructs that usually accompany them. Topics to be covered will include Classical versus Quantum views; order versus chaos; Newton's versus Einstein's Universe; Particles and Wave nature of matter; Radiation and Nuclear Energy.
*Prerequisite: MATH 30-1 or MATH 30-2*
*NOTE: This course does not qualify as a prerequisite for 200 or higher level ASTRO, GEOPH, MA PH or PHYS courses. This course is not eligible as a first year physics requirement in Pre-Professional programs i.e. Pre- Med, pre- Dentistry.*

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**PHYS 124**
**Introduction to Motion**
*3 credits, 3 hours lecture, 3 hours lab*
This is an algebra based physics course directed at students in the life and medical sciences. It discusses two distinct types of motion: motion of particles and collective motion (waves). A review of kinematics and dynamics; conservation of momentum and energy; vector forces and bodies in equilibrium; elasticity and fracture; vibrations; circular motion; waves; sound and light; optics; topics in modern physics.
*Prerequisite: MATH 30-1, and PHYS 20 or equivalent (PHYS 30 strongly recommended)*
*NOTE: Credit may be obtained for only one of PHYS 101, PHYS 102 or ENPHY 131 or University of Alberta's PHYS 108, PHYS 124, or PHYS 144*

**PHYS 126**
**Fluids, Fields and Radiation**
*3 credits, 3 hours lecture, 3 hours lab*
Physics 126 is a continuation of Physics 124. Fluid statics and dynamics, gases and kinetic interpretation; electrostatics; currents and circuits; magnetic field; electromagnetic induction; electromagnetic radiation (light) and its interaction with matter.
*Prerequisite: PHYS 124*
*NOTE: Credit may be obtained for only one of PHYS 100, PHYS 1130 or the University of Alberta's PHYS 109, PHYS 126, or PHYS 146*

**PHYS 144**
**Newtonian Mechanics and Relativity**
*3 credits, 3 hours lecture, 1 hour tutorial, 3 hours lab*
Introduction to vectors, kinematics in one dimension; Kinematics in two dimensions, Newton's Laws of Motion; Work and Energy, Impulse and Collisions, Relativity, J. Rotation of a rigid body about a fixed Axis.
*Prerequisite: Mathematics 31, Physics 30*
*Co-requisite: Math 1113 or equivalent*
*NOTE: Credit may be obtained for only one of PHYS 124, PHYS144 or ENPH 131*

**PHYS 146**
**Fluids and Waves**
*3 credits, 3 hours lecture, 1 hour tutorial, 3 hours lab*
Equilibrium and Elasticity, Fluid Statics and Dynamics, Simple Harmonic Motion, Mechanical Waves, Wave Properties of Light Reflection and Refraction, Interference, Diffraction, Quantum Mechanics.
*Prerequisite: PHYS 124 or PHYS 144*
*Co-requisite: MATH 1115 or equivalent*
*NOTE: Credit may be obtained for only one of PHYS 126 or PHYS 146*

**PHYS 235**
**Engineering Physics**
*3 credits, 3 hours lecture*
Fundamentals of technology including problem solving, dimensional analysis, significant digits, errors in measurement, and SI system of units will be covered. Course content includes: vectors, kinematics; Newton's Three Laws of Motion, friction, work, energy, power and efficiency, simple machines, impulse and momentum, temperature scales, and heat, expansion of solids and liquids, and calorimetry and heat transfer, wave theory and sound and optics.

**PHYS 261**
**Physics of Energy**
*3 credits, 3 hours lecture*
The course will focus on energy resources, human use of those resources, and some of environmental and health consequences. Topics include the nature of energy in its various forms; non- renewable resources, fossil fuels, and resource consumption; thermodynamics of combustion, energy conversion and efficiency; engines and refrigerators; heat transfer and home heating; electricity, hydro power and energy storage; radioactivity and nuclear energy; alternative and renewable resources. Course content is interdisciplinary, touching on aspects of chemistry, geology, and atmospheric science in addition to physics.
*Prerequisite: PHYS 124 and PHYS 126, and MATH 1113*

**PHYS 1130**
**Wave Motion, Optics and Sound**
*3 credits, 3 hours lecture, 3 hours lab every second week*
3.8 Engineering units for the University of Alberta Geometrical optics, optical instruments, oscillations, waves, sound, interference, diffraction, accompanied by related laboratory work.
*Prerequisite: Math 30-1, Math 31 and Physics 30 Co-requisite: MATH 100 or equivalent*
*NOTE: PHYS 1130 is restricted to Engineering students.*

**PHYSI 261**
**Elementary Physiology**
*6 credits, 3 hours lecture*
This introductory course in human physiology is intended for students in nursing and health-oriented programs. Its objective is the physiological processes which occur in the body, emphasizing how the many systems function and how balance among all the systems is maintained. Common pathologies will be referred to where appropriate as examples of disruptions in homeostasis. Morphological features will be discussed as necessary for an understanding of physiological processes.
*Prerequisite: Biology 30 and Chemistry 30*

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**PL SC 221**
**Introduction to Plant Science**
*3 credits, 3 hours lecture, 3 hours lab*
Principles of plant science for use in agriculture, forestry and environmental sciences. Emphasis on vascular plants in an applied context. Topics include: plant structure and function; reproduction and development; and diversity and management of vegetation and crops.

**PN 155**
**Nursing Foundations I: Introduction to Nursing**
*4 credits, 45 hours lecture, 15 hours lab*
This is the first nursing theory course of the diploma practical nurse program, and in it several concepts and processes are introduced. These concepts are further developed and applied throughout the diploma practical nurse program. The theory course introduces the learner to nursing by exploring the healthcare in Canada, the history of nursing, and evolving role of the practical nurse. Values, ethics, legalities, and legislation that affect nursing practice in Alberta are also introduced. The learner will relate the roles and responsibilities of the practical nurse to the direction of the professional association and standards of nursing practice. The nursing metaparadigm and nursing theory are explained as major concepts in nursing. Students are introduced to the holistic approach to client centred care. Critical thinking and critical inquiry skills are developed as the student applies nursing knowledge to the delivery of quality, safe nursing care.
*Co-requisites: COMM 103, PN 158, ANPH 100 and ANPH 101*

**PN 156**
**Nursing Foundations II: Basic Nursing**
*7 credits, 45 hours lecture, 60 hours lab*
This is a combined nursing theory and skills course which builds on theory and skills learned purpose of this course is to prepare the student practical nurse for the continuing care practicum. Topics include the metaparadigm of nursing, safety, professionalism and leadership, but the focus shifts from the application of these concepts to self to applying these concepts to the client. Emphasis will be placed on using the nursing process, demonstrating critical thinking and critical inquiry, applying the concepts of self care, and setting priorities of care. Students will develop nursing care plans tailored to client needs, and will demonstrate effective documentation, mathematical calculations, communication, and client teaching skills. The lab setting will be used for students to apply theory, to practice skills, and to competently perform the selected nursing skills required for the continuing care practicum.
*Prerequisites: PN 155, PN 158, ANPH 100, ANPH 101*
*Co-requisite: PHARM 130, PAPHY 105*

**PN 158**
**Health Assessment**
*4 credits, 30 hours lecture, 30 hours lab*
The Health Assessment course introduces the student to assessment of a client's health status and the identification of normal structures and functions of the physical component of the adult. Overt deviations from the normal are included. This course prepares the student to gather the data by obtaining a health history and conducting a physical examination. The course includes theory and laboratory practice
*Co-requisite: ANPH 100, ANPH 101*

**PN 160**
**Nursing Practice I: Continuing Care Practice**
*4 credits, 1960 hours practicum*
This is the first nursing practice course and provides opportunities for the student to gain experience as a member of the interdisciplinary team by providing safe, holistic and evidence informed nursing care in a continuing care setting, following the standards of practice for a practical nursing student.
*Prerequisites: ANPH 100, ANPH 101, HEED 102, COMM 103, PAPHY 105, PN 158, PN 155, PN 156, PHARM 130. Alberta Health Services mandatory certifications, CPR Level C for Health Care Providers, Clear Police Information Check (formerly known as a Criminal Record Check) and Vulnerable Sector Check, up-to-date immunizations, mask fit test, It's Your Move.*

**PN 200**
**Nursing Foundations III: Medical-Surgical Nursing**
*9 credits, 45 hours lecture, 90 hours lab*
The focus of this combined nursing theory and skills course is on nursing care and related skills based on evidence-informed medical/surgical nursing practice. The student builds upon previous knowledge, related theory and skills in adapting the nursing approach of the care of the medical/surgical client using the nursing metaparadigm and the nursing process. The student continues to develop leadership skills through the experience of mentorship. A laboratory component is included in which students apply theory and practice nursing skills related to medical/surgical nursing, including intravenous medication administration. This course prepares the student for the medical/surgical clinical practicum.
*Prerequisite: Successful completion of all first year courses*

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**PN 201A**
**Nursing Practice II: Acute Care Practice – Medicine**
*4 credits, 155 hours practicum*
Gain experience as a member of the health-care team in providing safe, holistic, nursing care based on best evidence to clients and families in an acute care medicine setting following the standards of practice for a practical nurse. This clinical course involves instructor supervised practice on an acute care medicine unit.
*Prerequisites: Successful completion of all first year courses, Alberta Health Services mandatory certifications, CPR Level C for Health Care Providers, up-to-date immunizations, It's Your Move, PN 200.*

**PN 201B**
**Nursing Practice II: Acute Care Practice – Surgery**
*4 credits, 155 hours practicum*
Gain experience as a member of the interdisciplinary health-care team by providing safe, holistic, and best-evidenced nursing care to clients in an acute care surgery setting following the standards of practice for a practical nurse. This course involves instructor- supervised clinical practice on an acute care surgical unit.
*Prerequisites: Successful completion of all first year courses, Alberta Health Services mandatory certifications, CPR Level C for Health Care Providers, up-to-date immunizations, It's Your Move, PN 200.*

**PN 202**
**Nursing Foundations IV: Maternity Nursing**
*3 credits, 45 hours lecture*
This nursing theory introduces the student to the childbearing family and the practical nurse's role in promoting, restoring, and maintain the health of the maternity client and her family. The student will use knowledge of the nursing process and the four concepts of the nursing metaparadigm to the care of the expectant family, before, during, and after the birth of the baby. The student will build upon previous nursing knowledge and related theory in adapting the nursing approach to the care and health promotion of the child-bearing family. The student will apply the collaborative interdisciplinary approach to maternity care. Assessment of family strengths, coping abilities, and life experiences are key to the practical nurse's role in health promotion. New developments in maternal and newborn care will be examined through addressing trends and issues in maternity care.
*Prerequisites: Successful completion of all first year courses, PN 200*
*Co-requisite: PN 203, PN 205*

**PN 203**
**Nursing Foundations V: Pediatric Nursing**
*3 credits, 45 hours lecture*
This theory course introduces the student to the pediatric client and their families. Theoretical concepts of assessment of the pediatric client related to growth and development are introduced. Pathophysiology, nursing care, communications, and health teachings techniques specific to pediatric clients and their families are discusses. This course builds on previous nursing knowledge and related theory, and assists the student in adapting nursing care for the pediatric client and their families through the use of nursing metaparadigm, nursing process, and growth and development theories. The student will apply the collaborative interdisciplinary team approach to pediatric care. Assessment of client and family strengths, coping abilities, and life experiences are key to the practical nurse's role in health promotion. New developments in pediatric care will be examined through addressing trends and issues in pediatric care.
*Prerequisites: Successful completion of all first year courses, PN 200*
*Co-requisite: PN 202, PN 205.*

**PN 204**
**Nursing Foundations VI: Community Nursing**
*3 credits, 45 hours lecture*
This nursing theory course provides the student with knowledge of theories on the family and community to promote the health and well-being of populations within the community. The course emphasizes the importance of collaboration between the interdisciplinary health care team, families, and communities to achieve safe, evidence informed community nursing practice. The student will build upon previous nursing knowledge and related theory in adapting the nursing approach to the care and health promotion of the family using the nursing metaparadigm and nursing process. Trends and issues in the care of families and communities will also be explored.
*Prerequisites: PN 200, successful completion of all first year courses.*

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**PN 205**
**Nursing Foundations VII: Mental Health Nursing**
*3 credits, 45 hours lecture*
Explore legal and ethical considerations and social stigmas related to mental health and illness. Examine care based on best evidence related to clients and their families as they adjust to changes in functioning associated with mental health issues and related treatments. Build upon previous knowledge and related theory in adapting the nursing approach to the care and health promotion of mental health clients and their families using a nursing meta-paradigm and nursing process. Trends and issues in mental health nursing will also be explored.
*Prerequisites: Successful completion of all first year courses, PN 200, PSYCH 106*

**PN 206**
**Nursing Foundations VIII: Transition to Practical Nurse Graduate**
*3 credits, 45 hours lecture*
This final theory course of the program prepares the student for the final comprehensive placement from student to graduate. The student will explore working within the parameters of a health care organization, labour relations, and the professional association. The student will also learn about power, empowerment, contributing to successful teams, types of management and leadership styles, professional development, continued competence, attaining and maintaining professional licensure, lifelong learning, and quality improvement – all of which contribute to becoming a professional practical nurse in today's health care field.
*Prerequisites: Successful completion of all previous courses*

**PN 207**
**Nursing Practice III: Focused Practice**
*3 credits, 116 hours practicum*
Integrate your program knowledge, skills, attitudes, and judgements as you gain an understanding of the role of the practical nurse. Apply your knowledge and skills in a clinical experience involving three weeks of instructor-supervised or preceptored clinical practice in one of the following settings: community, rural, maternity, pediatric, or mental health.
*Prerequisites: Successful completion of all previous courses, Alberta Health Services mandatory certifications, CPR Level C for Health Care Providers, Clear Police Information Check and Vulnerable Sector check, up-to-date immunizations*

**PN 208**
**Nursing Practice IV: Comprehensive Practice**
*4 credits, 155 hours practicum*
Integrate your program knowledge, skills, attitudes, and judgements as you gain an understanding of the role of the practical nurse. Apply your knowledge and skills in a clinical experience in a four-week, preceptored clinical practice as you make the transition from student to graduate practical nurse.
*Prerequisites: Successful completion of all previous courses, Alberta Health Services mandatory certifications, CPR Level C for Health Care Providers, Clear Police Information Check and Vulnerable Sector check, up-to-date immunizations*

**POLSC 101**
**Introduction to Government and Politics**
*3 credits, 3 hours lecture*
This is the introductory course in Political Science. Students are encouraged to think critically about how their lives and the world are shaped by power, ideas, interests, rules, and laws. It is intended to provide students with general political awareness and insight, thus making them more informed about the world in which they live. The student will also develop an understanding of key political processes and institutions

**POLSC 210**
**History of Political Thought**
*6 credits, 32 weeks, 3 hours lecture*
This is the introductory course in Political Philosophy. It is intended to introduce students to the enduring questions and problems of political life. It proceeds through an examination of select texts of some of the greatest thinkers of Political Philosophy. A truly engaged reading of these texts can be the most liberating and humanizing of experiences. Through the study of these texts, the student's understanding of the political thought should deepen.

**POLSC 220**
**Canadian National Government and Politics**
*6 credits, 3 hours lecture*
This course provides a detailed introduction to Canadian government and politics at the national level. The course examines the institutions, roles, processes and policies of the national government. It is a core course in the Canadian field and is a prerequisite for almost all other courses in Canadian politics.

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**POLSC 221**
**Canadian Government**
*3 credits, 3 hours lecture*
This course is designed to introduce students to Canadian politics and government. It gives non-political science majors some understanding of the major themes, issues and conflicts in Canadian political life. To this end, the course will examine the nature of the parliamentary system and the federal government, its evolution and current status and how this has been shaped by democratic politics in Canada. Emphasis will also be placed on the dynamics of federal-provincial relations and outstanding constitutional issues.
*NOTE: POLSC 221 is not available to students who have taken or plan to take POLSC 100 or POLSC 220*

**POLSC 260**
**International Relations**
*6 credits, 3 hours lecture*
An introduction to contemporary international relations that attempts to develop an understanding of political events at the international level. The course covers the nature of foreign policy, the dynamics of interactions between states, the causes of war, imperialism, and non-state actors. The course will be run as a seminar.
*Prerequisite: POLSC 101 or permission of the Program Chair*
*NOTE: This is the core course in the field of international relations and a prerequisite for most 400-level courses in the field*

**POLSC 266**
**Politics of Globalization**
*3 credits, 3 hours lecture*
The myths and realities of the so-called globalization of the international political economy; the historical organization of the global economy; the rise of transnational corporations; changing relations between the north and the south; new roles for the nation-state; and implications for democracy, citizenship, and political change. The rise of organized global discontent will also be addressed.
*Prerequisite: POLSC 101 or permission of the Program Chair NOTE: Not open to students with credit in POLSC 110*

**POLSC 283**
**Issues and Trends in World Politics I**
*3 credits, 3 hours lecture*
This course will introduce students to the study of global politics. Contending theoretical approaches to the subject will be examined, as will major trends in current global politics. Special attention will be given to the role of Canada in global politics.

**POLSC 302**
**Classic Works of Political Thought**
*3 credits, 3 hour lecture*
This course will examine critically some major works in Political Philosophy not normally covered in Political Science 210.
*Prerequisite: POLSC 210 or permission of the Program Chair*

**POLSC 318**
**The Politics of Health Care in Canada I**
*1.5 credits, 3 hours lecture*
This course examines the development of Canada's health care system, its legislative and philosophical grounds, as well as its financing and delivery.
*NOTE: Open only to students in the Faculty of Nursing*

**POLSC 319**
**The Politics of Health Care in Canada II**
*1.5 credits, 3 hours lecture*
This course examines current stresses in the Canadian health care system such as challenges to universality and alternative health delivery systems from a comparative perspective.
*Prerequisite: POLSC 318*
*NOTE: Open only to students in the Faculty of Nursing*

**POLSC 332**
**Introduction to United States Politics and Government**
*3 credits, 3 hours lecture*
The actors, institutions, and processes of American politics and governance, and the forces that influence them.

**POLSC 365**
**Canadian Foreign Policy**
*3 credits, 3 hours lecture*
This course analyzes Canadian foreign policy, particularly since the Second World War. The focus is on how both domestic and external forces influence the decision-making process.

**POLSC 381**
**Issues and Trends in World Politics II**
*3 credits, 3 hours lecture*
Selected issues and trends in world politics are examined. The course will examine how and why states and non-governmental actors (corporations, trans-national actors like Amnesty International, etc.) interact and manage issues including wars, terrorism, globalization, human rights, global poverty, and migration.

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**POLSC 391**
**Political Parties of Canada and Other Western Democracies**
*3 credits, 3 hours lecture*
This course compares the political parties of Canada with those of some other Western democracies. Both the theoretical aspects of what parties ought to do and the practical aspects of how they do behave in the real world are considered.
*Prerequisite: POLSC 220*

**PRO 005**
**Problem Solving: Critical Thinking Skills**
*2 credits, 2 hours lecture*
Students will learn what it takes to be a critical thinker, and learn what they need to do to become one. Students will identify their values and attitudes, their thinking habits, what a thinking error is, and how to judge ideas. Students will learn how to use these skills at home, work and school.

**PROC 101**
**Applied Science**
*4 credits*
Topics include applied mathematics, elementary mechanics and elementary thermodynamics, mechanical drawing, administration, industrial legislation, workplace hazardous materials, plant safety and plant fire protection as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part A Power Engineering.

**PROC 102**
**Plant Services**
*4 credits*
Areas covered are environment, material and welding, piping and valves, high pressure boiler design, high pressure boiler parts and fittings, high pressure boiler operation and feedwater treatment as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part A Power Engineering.

**PROC 103**
**Steam Generation**
*4 credits*
Course includes prime movers and engines, pumps and compressors, lubrication, electricity, controls, instrumentation and computers, heating boilers, and heating systems as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part B Power Engineering.

**PROC 104**
**Prime Movers & Auxiliaries**
*4 credits*
Topics include heating boiler and heating system controls, auxiliary building systems, vapour compression refrigeration, absorption refrigeration, air conditioning, air conditioning systems, boiler maintenance and types of plants as identified in the Alberta Boilers Safety Association Reference Syllabus for 4th Class Part A Power Engineering.
*NOTE: Work placement may be outside Wood Buffalo Region*

**PROC 105**
**Work Experience**
*12 credits*
Six month paid work experience with industry.
*Prerequisite: Completion of all 1st term courses.*
*NOTE: Work placement may be outside Wood Buffalo Region*

**PROC 210**
**Organic Chemistry**
*1 credit*
Topics will cover the basics of oil sands chemistry, with an emphasis on basic organic chemistry. The chemistry of solids, fluids and vapours will be emphasized.

**PROC 230**
**Introductory Process Instrumentation**
*1.5 credits*
This course will introduce the student to the fundamentals of oil sands processes as well as the equipment used. Topics like controllers, pumping, exchangers, and control loops will be covered. Basic simulators and process lab equipment operation will also be covered.

**PROC 232**
**Advanced Process Instrumentation**
*2 credits*
This course covers the theory behind the equipment and the fundamentals discussed in the flow, measurement of pressure and flow, digital control systems, and introductory and advanced instrumentation simulators and automatic loop control.

**PROC 235**
**Upgrading Processes**
*2 credits*
Special topics unique to hydrocarbon processing will be discussed. Topics will include upgrading processes like distillation, fractionation, thermal cracking for cokers, hands- on lab, and computer simulators for hydrocarbon processing.

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**PROC 250**
**Environmental Management and Processes**
*1.5 credits*
Topics will include environmental control practices and company responsibility and liability under environmental legislation.

**PROC 260**
**Work Experience**
*12 credits*
Six month paid work experience with industry.
*Prerequisite: Completion of all second year courses*
*NOTE: Work placement may be outside of the Wood Buffalo Region*

**PROC 3100**
**Applied Science**
*4 credits*
Topics include applied math, applied mechanics, thermodynamics, and applied science as identified in the Alberta Boilers Safety Association Reference Syllabus for the first paper of 3rd Class Part A Power Engineering.

**PROC 3200**
**Plant Services**
*4 credits*
This course teaches industrial legislation, codes, boiler calculations, fuels and combustion, piping, electrotechnology, electrical calculations, control instrumentation and fire prevention and plant safety as identified in the Alberta Boilers Safety Association Reference Syllabus for the second paper of 3rd Class Part A Power Engineering.

**PSYCH 020**
**Psychology 20**
*5 credits, 5 hours lecture*
This course will focus on personal psychology as a field of scientific research. It will engage learners in understanding personality, behavior, intelligence, emotional issues of adolescents, behavior disorders, heredity and environment, biological influences on behavior and understanding perception.
*Alberta Education Course Equivalency: Personal Psychology 20*
*Prerequisite: Social Studies 10 or permission from the Program Chair*
*Co-requisite: ENGL 020 or 023 or permission from the Program Chair*

**PSYCH 030**
**Psychology 30**
*5 credits, 5 hours lecture*
This course will focus on psychology as a scientific discipline and a vibrant research field. It will engage learners in the use of qualitative and quantitative date collection tools and research methods common to psychology and related social sciences. Learners will be acquainted with the use of statistics in the social sciences and an understanding of the ethical guidelines for human research will be emphasized. Examples of modern psychological research will also be examined as case studies. Students will have the opportunity to design and applied research project to show understanding of research principles.
*Alberta Education Course Equivalency: Experimental Psychology 30*
*Prerequisite: Social Studies 10 or permission from the Program Chair*
*Co-requisite: ENGL 020 or ENGL 023 or permission from the Program Chair*

**PSYCH 103**
**Introduction to Psychology**
*3 credits, 3 hours lecture*
This course provides an introduction to the study of human behaviour. Students are introduced to the history of psychology, its methods, and the current state of research knowledge. A wide range of topics will be surveyed, including learning, memory, perception, biological psychology, social psychology, psychological development in children, personality, psychological disorders, therapy, health psychology and ethics in research and clinical practice.
*NOTE: Open to students enrolled in: the BScN degree, the Practical Nurse diploma, and the BSc in Environmental Science degree. Not open to students with credit in PSYCH 104 or 105.*

**PSYCH 104**
**Basic Psychological Processes**
*3 credits, 3 hours lecture*
Psychology 104 provides an exciting introduction to the study of human behaviour. This course explores how people sense and perceive the world, learn and remember, think and solve problems, and experience different states of consciousness. We examine how these processes are linked to the workings of the central nervous system (brain). As psychology is a science, we develop an understanding of scientific methodology to facilitate investigation of these phenomena.

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**PSYCH 105**
**Individual and Social Behaviour**
*3 credits, 3 hours lecture*
Psychology 105 builds on the content of Psychology 104 through the exploration of four aspects of human psychology including Intelligence, Developmental Processes, Social Psychological Processes, and Clinical Processes. This course examines the nature of intelligence, cognitive and social development throughout the life span, explores the social psychological aspects of a person with specific reference to the self, interpersonal, and group dynamics, and motivation and emotion. In addition, clinical areas of psychology relating to personality, abnormal behaviour, psychotherapy, and health psychology are examined. In Psychology 105, students continue to develop their understanding of scientific methodology through experimental research laboratories.
*Prerequisite: PSYCH 104*

**PSYCH 106**
**Psychological Principles for Nursing**
*3 credits, 3 hour lecture*
This course covers psychological principles and processes as they relate to nursing. Topics include research design and analysis, lifespan development, brain and behaviour, memory and cognitive processing, social psychological processes, personality, psychological disorders and their treatment.
*NOTE: Open only to students enrolled in the Nursing Program. Not open to students with credit in PSYCH 104 or 105*

**PSYCH 213**
**Introduction to Research Methods in Psychology**
*3 credits, 3 hours lecture, 3 hours lab*
Introduction to research methods and the application of statistical procedures in psychological science. Emphasis is on mastering fundamental scientific and technological skills associated with literature review, research design, experimental manipulation, data collection, data analysis, data presentation, data interpretation, and scientific writing. Topics to be studied include advantages and disadvantages of the experimental method, the logic, nature, and problem of control, basics of measurement and types of research designs. In addition, applications of such statistical techniques as the t-test, correlation, simple linear regression, chi square, and selected nonparametrics to the analysis of data obtained with elementary research designs, will be examined in laboratory sessions.
*Prerequisite: PSYCH 104 and STAT 151 or equivalent*

**PSYCH 223**
**Developmental Psychology**
*3 credits, 3 hours lecture*
Biological, cognitive, and social aspects of psychological development are examined in this course. Special emphasis is placed on prenatal development, infancy, childhood, and adolescence. Topics include heredity and environment, intellectual development and social development.
*Prerequisite: PSYCH 104 and PSYCH 105*

**PSYCH 233**
**Theories of Personality**
*3 credits, 3 hours lecture*
Why do people behave as they do? Are people free to choose their own behaviour, are they easily changeable, and are they basically rational beings? How does personality develop and how is it structured? Why do personality problems occur and how can they be solved? In Psychology 233 students will learn about several major paradigms that guide research and theorizing in the area of personality and offer answers to many intriguing questions about human nature. These approaches include the Psychoanalytic, the Neo-psychoanalytic, the Existential- Humanistic, and the Transpersonal paradigms.
*Prerequisite: PSYCH 104 and PSYCH 105*

**PSYCH 238**
**Introduction to Forensic Psychology**
*3 credits, 3 hours lecture*
This course will provide students with an in-depth introduction to the field of forensic psychology. Forensic psychology explores the relationship between psychology and the legal system, including the courts, prison, parole, and policing. Topics that will be discussed during the course include: offender profiling, forensic assessment, eyewitness testimony, expert testimony, jury decision-making, correctional assessment and treatment, violent offenders, spousal assaulters, sex offenders, risk assessment and mental disorder/criminal responsibility.
*Prerequisite: PSYCH 104 and PSYCH 105*

**PSYCH 239**
**Abnormal Psychology**
*3 credits, 3 hours lecture*
This course is a detailed introduction to Abnormal Psychology and psychopathology. The topics include distinction between normality and abnormality, diagnosis, etiology and treatment. The classification scheme (DSM IV) developed by the American Psychiatric Association is the basis on which various psychopathological categories are selected for discussion. Current topics such as community mental health, legal and ethical issues are also discussed.
*Prerequisite: PSYCH 104 and PSYCH 105*

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**PSYCH 241**
**Social Psychology**
*3 credits, 3 hours lecture*
People are social beings who interact in a variety of ways. We present ourselves to and evaluate each other, influence the attitudes and behaviour of each other, and engage in relationships such as loving and hating, helping and hurting, cooperating and competing. This course covers these and other topics in the area of social psychology.
*Prerequisite: PSYCH 104 and PSYCH 105 or PSYCH 103*
*NOTE: PSYCH 241 and SOCY 241 may not both be taken for credit*

**PSYCH 258**
**Cognitive Psychology**
*3 credits, 3 hours lecture*
This course provides an overview of the field of cognitive psychology. Topics include information processing, attention, memory, language processing, reasoning and problem solving. The emphasis will be on developing an understanding of general theoretical concepts that provide a unification of existing evidence and motivate current research.
*Prerequisite: PSYCH 104 and STAT 151*

**PSYCH 267**
**Sensation and Perception**
*3 credits, 3 hours lecture*
This course is an introduction to the theoretical and experimental issues associated with the sensory and perceptual experience of the world. The main emphasis is on understanding basic perceptual phenomena, such as the relation between physical stimuli and behaviour/ experience. To this end, we must consider: the nature of the physical stimuli; the anatomy and physiology of the sense organs and receptors; the anatomy and physiology of the neural paths from receptors to the brain; and how the brain processes sensory information.
*Prerequisite: PSYCH 104 and STAT 151*

**PSYCH 275**
**Brain and Behaviour**
*3 credits, 3 hours lecture*
This course is designed as an introduction to the area of Biopsychology. Its focus is the neurobiological bases of behaviour. The first half of the course deals with the anatomy of the nervous system, the physiology of nerve cells, neuroplasticity, and neuropharmacology. The second half examines the physiological mechanisms involved in perception and movement, motivation, emotion, learning, memory, sleep, and psychiatric disorders.
*Prerequisite: PSYCH 104 and BIOL 30 (or equivalent)*

**PSYCH 282**
**Behaviour Modification**
3 credits, 3 hours lecture
Psychology 282 introduces students to issues in the field of Learning and behaviour including principles and procedures of classical and operant conditioning. Students in this course will learn practical skills such as how to record behaviour, design, implement, and evaluate behaviour change plans. Much of the lecture materials comes from basic research, however, applied examples will frequently be used and application of principles will often be obvious.
*Prerequisite: PSYCH 104, no exceptions or waivers.*
*NOTE: Not open to students with credit in PSYCH 281*

**PSYCH 296**
**Human Sexual Behaviour**
*3 credits, 3 hours lecture*
Psychology 296 focuses on the examination of human sexual behaviour. Sexuality is an integral part of our lives. This course presents a scientific foundation for the understanding of the psychological, physiological, social and behavioural aspects of human sexuality. In addition to studying historical changes in sexual practices and attitudes, the course will review and evaluate current research, issues and concerns about sexuality in order to provide contemporary and relevant curriculum material. Topics include psychosexual development, gender roles, sexual orientation, sexual anatomy, alternate methods of reproduction, pregnancy/birth, contraception, sexually transmitted diseases, sex education, sexism, love and attraction, eroticism, sexual abuse, sexual dysfunctions, sex therapy, paraphilia, and sexuality through the life cycle.
*Prerequisite: PSYCH 104 and PSYCH 105 or permission of Program Chair*

**PSYCH 321**
**Introduction to Industrial/ Organizational Psychology**
*3 credits, 3 hours lecture*
Psychology 321 is an applied course designed to introduce students to the subject of Industrial/ Organizational Psychology. Through lectures, applied assignments, and guest speakers, students will examine research and applied topics of concern to Industrial/ Organizational Psychologists. Topics include legal issues in employee selection, job analysis and evaluation, employee selection techniques, performance appraisal, training systems, leadership, group behaviour and conflict, and communication.
*Prerequisite: PSYCH 104 and PSYCH 105 or permission of Program Chair*

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**PSYCH 375**
**History of Psychology**
*3 credits, 3 hours lecture*
This course examines the history of psychology from the time of the early Greeks until the present.
*Prerequisite: A 200-level psychology course. It is recommended that this course be taken by students who have successfully completed several psychology courses*

**PSYCH 390**
**Environmental Psychology**
*3 credits, 3 hours lecture*
This course is the study of the interactions between people and the large-scale environments (places) in which they live, learn, work, and play. Topics will include place selection, travel behaviour, personal space, privacy, and the impact of climate, noise, crowding, interior decoration, and wilderness on mood and behaviour. Also discussed will be designing places to further such goals as preventing crime, increasing social interaction, improving worker performance, and improving morale of people in institutions.
*Prerequisite: PSYCH 104 and PSYCH 105*

**PWELD11**
**Workplace Safety and Tools**
*3 credit, 15 hours*
This course provides an introduction to the safety legislation, regulations, and industry policy related to Welding. Topics include the Occupational Health and Safety Act, regulations, and code; proper use of PPE; and work safe practices. Safety precautions for hand tools, power tools, oxy-fuel equipment, cutting processes, materials handling are also covered.

**PWELD120**
**Welding Technology & Properties of Metal**
*5 credits, 80 hours*
This course provides an introduction to reading and interpreting drawings, including the purpose and use of the drawings. Identification and interpretation of symbols, elements, and information obtained from drawings are also discussed. Additional topics covered within this course are electrical concepts, metal identification, effects of heat treatment, joint and weld types, distortion and methods of control, weld faults, steel hardfacing, and weld symbols.

**PWELD130**
**GMAW, FCAW, MCAW and SAW**
*3 credits, 46 hours*
This course will cover the selection of wire feed welding equipment and consumables, as well as the selection of shielding gases for the wire feed process. Set up, maintenance, and troubleshooting will also be covered. Learners will have the opportunity to perform fillet and groove welds on mild steel; welds on aluminum; FCAW and MCAW operations in multiple positions; GMAC, FCAW, and MCAW welds on mild steel pipe. The course will also cover the properties and principles of aluminum.

**RELST 101**
**Introduction to World Religions: Western Religions**
*3 credits, 3 hours lecture*
This course is designed to introduce the three major western religious traditions of Judaism, Christianity, and Islam. Students will be introduced to the historical development, basic beliefs, and contemporary practice of each of these major religions.

**REN R 110**
**Natural Resource Measurement**
*3 credits, 3 hours lecture, 3 hours lab*
This course is designed to introduce students to the principles and practices of measuring timber, water, range, wildlife, biodiversity, and recreation.

**REN R 120**
**Woody Plants I**
*3 credits, 3 hours lecture, 4 hours lab*
The identification, classification, distribution, habitat and basic ecology of trees, important shrubs and herbaceous species in forests of Alberta and Canada. There will be field trips to sites where living specimens can be examined. A plant collection is required.

**REN R 250**
**Water Resource Management**
*3 credits, 3 hours lecture*
This course encourages students to examine the global perspective of supply of and demand for water, basic hydrologic principles, concepts in water management, human intervention in the hydrologic cycle and environmental issues related to this intervention. The student will be expected to conduct library and/or field research and to report on their results.

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**SCIE 010**
**Science 010**
*5 credits, 5 hours lecture*
This course is a grade 10 equivalency general science course designed to prepare students for entry into Biology 025, Chemistry 025, and Physics 025. It is especially recommended for those who have been away from high school science for 3 or more years. The course reviews basic concepts of math and science which are essential for success at the 025 level, including the metric system and the scientific method, while fostering a positive attitude toward the study of science and math.
*Co-requisite: Grade 9 program of studies or equivalent or AFL 009 and AFM 009*

**SCIE 030**
**Science 30**
*5 credits, 6 hours lecture*
Science 30 provides students an opportunity to investigate and analyse topics in the area of Biology, Chemistry and Physics, with a particular focus on environmental interactions. Topics include: electromagnetic field theory and its application in motors, generators and transformers; the impacts of acids and bases, organic compounds and air pollutants on aquatic and terrestrial ecosystems; and the principles of heredity and genetics and the immune and circulatory systems.
*Pre-requisite: SCIE 010*
*Co-requisite: MATH 20-1, Math 20-2, or Math 20-3 or permission from the Program Chair*

**SOCY 020**
**Sociology 020**
*5 credits, 5 hours lecture*
A study of human relationships, human behaviour, social institutions, culture, minorities, mass communication, populations, mass society, modern society, and the future of society.
*Alberta Education Course Equivalency: Sociology 20*
*Prerequisite: ENGL 010 or ENGL 013*

**SOCY 100**
**Introductory Sociology**
*3 credits, 3 hours lecture*
As an introduction to the discipline of sociology, this course will discuss and attempt to answer a number of fundamental questions about societies in general and Canadian society in particular. Some of these questions are: What is sociology and how did it emerge? What is culture and how it is transmitted? What are the sources of inequality and how does society deal with inequality? What are the functions of social institutions such as family, economy, education and polity? How do population change, urbanization, social and political movements change the nature of society?

**SOCY 101**
**Canadian Society**
*3 credits, 3 hours lecture*
This course examines the development of Canadian society: including such topics as French-English relations, regionalism, relations with the USA, native rights, Canadian mosaic, inequalities, and conflicts.

**SOCY 102**
**Social Problems**
*3 credits, 3 hours lecture*
The objective of this course is to analyze the important social problems confronting industrial societies in general and North American society in particular. Determinants of social problems and their sustaining factors will be analyzed from a theoretical perspective. While the emphasis is on sociological explanations, an interdisciplinary approach will be used wherever applicable. Social problems surrounding major social institutions such as family, economy, education and polity as well as social issues related to inequality, environment, technology and deviance will also be dealt with in sufficient detail.
*Prerequisite: SOCY 100*

**SOCY 212**
**Classical Social Theory**
*3 credits, 3 hour lecture*
An exploration of foundational contributions and the relevance of the works of Marxs, Weber, Durkheim and Simmel. This course emphasizes close reading of primary and secondary texts to cultivate reading, writing and reasoning skills.
*Prerequisite: SOCY 100*

**SOCY 224**
**Sociology of Deviance and Conformity**
*3 credits, 3 hours lecture*
This course will examine the processes involved in defining behaviour patterns considered to be deviant. Various biological, psychological, and more importantly sociological factors that influence conformity and deviance will be analyzed in detail. In addition, selected varieties of deviance such as alcoholism, drug abuse, sexual deviance, mental illness and public reaction to such deviances will also be discussed.
*Prerequisite: SOCY 100 or SOCY 102 or permission of Program Chair*

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**SOCY 241**
**Social Psychology**
*3 credits, 3 hours lecture*
People are social beings who interact in a variety of ways. We present ourselves to and evaluate each other, influence the attitudes and behaviour of each other, and engage in relationships such as loving and hating, helping and hurting, cooperating and competing. This course covers these aspects of social interaction.
*Prerequisite: One of SOCY 100, SOCY 102, PSYCH 103, or PSYCH 104 and PSYCH 105*
*NOTE: SOCY 241 and PSYCH 241 may not both be taken for credit*

**SOCY 251**
**Population and Society**
*3 credits, 3 hours lecture*
This course is an introduction to demography in its formal and social aspects. The main focus of the course is the impact of demographic variables (fertility, mortality, and migration) on the size, composition and distribution of populations. Differing population concerns of more developed and less developed countries and their respective policy responses also will be analyzed in detail. In addition, the course will also introduce rudimentary methods of demographic analysis.
*Prerequisite: SOCY 100*

**SOCY 260**
**Inequality & Social Stratification**
*3 credits, 3 hours lecture*
This course is intended to provide a detailed theoretical and historical introduction to social stratification. Theoretical contributions of classical and contemporary sociologists will be the primary focus of the first part of the course. The second part will concentrate on the analysis of social inequality in Canada, with special emphasis on social mobility and poverty in Canada.
*Prerequisite: SOCY 100*

**SOCY 261**
**Social Organization**
*3 credits, 3 hours lecture*
This course is a theoretical (classical as well as contemporary) study of the process of social organization. Primary emphasis is on the emergence of social organization, its sources of stability, conflict and change.
*Prerequisite: SOCY 100 or SOCY 102*

**SOCY 269**
**Introduction to Sociology of Globalization**
*3 credits, 3 hours lecture*
This course is an introduction to the concept, processes and dimension of globalization and its possible consequences on societies North and South and on people inhabiting them. In addition, various theoretical perspectives on globalization and the possible alternatives to the process also will be examined.
*Prerequisite: SOCY 100*

**SOCY 271**
**The Family**
*3 credits, 3 hours lecture*
This course consists of the historical and cross-cultural study of the structure and functions of the family. The institutional characteristics and current trends in the family within contemporary societies are examined closely. Special emphasis is placed on current problems and issues regarding the Canadian family and its future prospects.

**SOCY 301**
**Sociology of Gender Roles**
*3 credits, 3 hours lecture*
This course is a study of gender roles from the perspective of social inequality. It will examine the explanations of gender differences from an interdisciplinary perspective, with particular emphasis on sociological explanations. A brief look at historical as well as cross-cultural gender inequalities will also be attempted. The primary focus of the course is on the gender differentiation which exists in major social institutions such as family, economy, polity, education and religion, with special reference to contemporary Canadian society.
*Prerequisite: SOCY 100*

**SOCY 304**
**Sociology of Sports**
*3 credits, 3 hours lecture*
This course examines the profound influence sports has on social life in Canada and in the global community. A number of theoretical perspectives will be utilized to analyze the impact of sports on societies. Inequalities (gender, social class, ethnicity, age, etc.) and deviances (illicit drugs, violence, sexual exploitation, gambling, etc.) in the context of sports will be the primary focus of the course. The impact of sports on various social institutions (family, education, economy, polity, religion, health care) also will be analyzed in detail. While the main emphasis is on North American society, the growing significance of sports in the global context also will be discussed.
*Prerequisite: SOCY 100*

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**SOCY 315**
**Introduction to Social Methodology**
*3 credits, 3 hours lecture*
Research design, data collection and data processing techniques used by Sociologist. Topics include: research values and ethics, reliability and validity, experimentation, survey research techniques, historical methods, field research and content analysis.
*Prerequisite: SOCY 210*

**SOCY 352**
**Population, Social and Economic Development**
*3 credits, 3 hours lecture*
This course will analyze the close interrelationships that exist between economic, social and demographic variables in the developmental process of a country. While quantitative population problems of the Third World are the primary focus, education, health, aging and obesity, which are of significant relevance in advanced countries, will also be discussed in appropriate detail.
*Prerequisite: SOCY 100*

**SOCY 363**
**Sociology of Work and Industry**
*3 credits, 3 hours lecture*
Sociological analysis of the changing nature and content of work, its diversity of industrial contexts and organizational forms, and its consequences for individuals institution and society as a whole from Canadian and comparative perspectives.
*Prerequisite: SOCY 100*

**SOCY 368**
**Canadian Ethnic and Minority Group Relations**
*3 credits, 3 hours lecture*
This course examines the ethnic factor in Canadian society. Major theoretical concepts are used to explore immigration, ethnic diversity, ethnic relations and ethnic stratification. Selected case studies from other diverse societies provide a comparative perspective.
*Prerequisite: SOCY 100 or SOCY 102*

**SOCY 375**
**Sociology of Aging**
*3 credits, 3 hours lecture*
The purpose of this course is to examine the process of aging from social, cultural and demographic perspectives. The focus is on the social gerontological aspects of aging as opposed to the developmental aspects. The course will concentrate on the impact of aging on the self-concept of the elderly, and how they and the institutions and activities in which they participate, are affected by the process of aging. While the primary emphasis of the course is on aging in Canada, the cross cultural issues will also be discussed in sufficient detail.
*Prerequisite: SOCY 100 or permission of the Program Chair*

**SOCY 376**
**Sociology of Religion**
*3 credits, 3 hours lecture*
This course is an introduction to the study of the Sociology of Religion. This course will concentrate on the analysis of religion as a social phenomenon, classical and contemporary theories of religion, nature and structure of religious organizations, relationship between religion and other social institutions, influence of religion in promoting and preventing social change, the role of religion in social integration and social conflict as well as a discussion of the future of religion in modern society.
*Prerequisite: SOCY 100*

**SOILS 210**
**Introduction to Soil Science and Soil Resources**
*3 credits, 3 hours lecture, 3 hours lab*
An examination of the elementary aspects of soil formation, soil occurrence in natural landscapes, soil classification, soil resource inventory, basic morphological, biological, chemical and physical characteristics employed in the identification of soils and predictions of their performance in both managed and natural landscapes.
*Prerequisite: Must have completed a university-level course in life or natural sciences. A university-level chemistry course is strongly recommended*

**SOST 010**
**Social Studies 010**
**5 credits, 5 hours lecture**
Students will explore multiple perspectives on the origins of globalization and the local, national and international impacts of globalization on lands, cultures, economies, human rights and quality of life. Students will examine the relationships among globalization, citizenship and identity to enhance skills for citizenship in a globalizing world. The infusion of multiple perspectives will allow students to examine the effects of globalization on peoples in Canada and throughout the world, including the impact on Aboriginal and Francophone communities.
*Alberta Education Course Equivalency: Social Studies 10*
*Co-requisite: ENGL 010 or ENGL 013 or permission from the Program Chair*

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**SOST 030**
**Social Studies 030**
*5 credits, 6 hours lecture*
Social Studies 030 explores the origins and complexities of ideologies. Students will investigate, analyze and evaluate government policies and actions and develop individual and collective responses to contemporary local, national and global issues.
*Alberta Education Course Equivalency: Social Studies 30*
*Prerequisite: ENGL 020 or ENGL 023, and SOCY 020 or SOST 010 or equivalent or permission from the Program Chair*

**SOWK 110**
**Introduction to Human Services and Basic Counselling**
*3 credits, 3 hours lecture*
This course will introduce the student to the broad range of opportunities available in the Human Services field. Additionally, the course will introduce the student to basic professional counselling skills, preparing them to enter into a professional helping role

**SOWK 120**
**Rural and Northern Practice**
*3 credits, 3 hours lecture*
This course will explore the role of the social worker in Canadian rural, northern and remote communities and how urbanization and industrialization has impacted the development of these areas and its people.

**SOWK 125**
**Social Work Practice from an Anti-Oppressive Perspective**
*3 credits, 3 hours lecture*
In this introductory course, concepts that address oppression and oppressed people, from historical and contemporary perspectives, are applied to practice models. In particular, issues associated with internalized dominance and oppression are explored. Different anti-oppressive theories and perspectives are applied to provide a framework for practice. Students will use self-reflection and will share their own experiences to learn about strategies to promote anti-oppressive policy and practice.

**SOWK 130**
**Addictions and Mental Health**
*3 credits, 3 hours lecture*
This course will examine current addictions and mental health theories and the role of the social worker in these areas of practice. The learner will also explore the impacts addictions and mental health disorders have on individuals, families and communities.

**SOWK 155**
**Practicum I**
*6 credits, 360 hours*
The student will demonstrate competency of acquired theoretical skills as applied in a field placement. Practica are organized with consideration of relevant personal or practice backgrounds, learners' academic needs, areas of interest and organization fit. Subject to certain conditions, students may also complete their practicum in their workplace. As part of this course, learners will be supported through scheduled discussions with their practicum instructor and peers. This instructor-guided reflective, integration seminar is designed to support experiential learning.
*Prerequisite: SOWK 201, 110, 130, 120, 125 & 220*

**SOWK 201**
**Introduction to Social Welfare and Social Work**
*3 credits, 3 hours lecture*
This course will provide an opportunity for students to gain an understanding of social welfare in its broadest terms and the profession of social work within this realm. This course will introduce students to the professional values, ethics, knowledge bases, roles, responsibilities, fields of practice, and practice settings of social work; encourage students to critically examine their beliefs, values, and attitudes in relation to society of which they are members; and enable students to explore their individual interests within the profession of social work. The complexity of social issues and the concepts of diversity, empowerment, and advocacy will also be emphasized.

**SOWK 210**
**Social Policy**
*3 credits, 3 hours lecture*
This theory course provides in-depth knowledge and understanding of social policy and its relationship to and impact on human services work. Social policy concepts are discussed and then applied to a variety of Canadian and Indigenous policy issues and societal trends. The benefits and disadvantages of established social policies are examined from the perspectives of marginalized groups. Students are encouraged to raise issues and cite examples from their own experiences and to examine them in light of historical and current political realities

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**SOWK 220**
**Practice with Families**
*3 credits, 3 hours lecture*
This course will explore theories and trends in family practice from a generalist approach. Students will obtain an understanding of family assessment, dynamics, development, and evaluation and how these concepts apply to different cultures and social systems. In addition, students will also explore the role of the social worker and how to apply various theories and concepts to practice.

**SOWK 225**
**Social Work in Organizations**
*3 credits, 3 hours lecture*
This course will assist students to identify and understand the role of social workers as managers within many types of organizations. Students will learn the importance of administration in organizations that provide social services and the relationship between services and the implementation of various policies. The course will also examine the structure and function of organizations, and the issues of development and change. Students will observe and comment upon the issues addressed by multicultural organizations and the challenges that staff in these organizations face. They will be able to understand the major functions of management and their relevance. Questions surrounding values and ethics in the workplace will be addressed. Attitudes and issues relevant to social work will also be examined in light of the different responsibilities of the social work manager.

**SOWK 230**
**Community Development**
*3 credits, 3 hours lecture*
This course will introduce the student to the basic principles, concepts, techniques, processes, history and models of community development from a Canadian social work perspective.

**SOWK 235**
**Social Work with Groups**
*3 credits, 3 hours lecture*
This course focuses on the processes and dynamics of group work in social work practice. The theoretical underpinnings of group work are explored with an emphasis on values and practices that differ across cultures and consequently impact group work. A variety of group types, phases of group development, intervention techniques, and leadership qualities are examined. Students will apply concepts of group work in the classroom and will have opportunities to practice with and observe groups.

**SOWK 255**
**Practicum II**
*6 credits, 360 hours*
The student will demonstrate competency of acquired theoretical skills as applied in a field placement. Practica are organized with consideration of relevant personal or practice backgrounds, learners' academic needs, areas of interest and organization fit. Subject to certain conditions, students may also complete their practicum in their workplace. As part of this course, learners will be supported through scheduled discussions with their practicum instructor and peers. This instructor-guided reflective, integration seminar is designed to support experiential learning.
*Prerequisite: SOWK 155, 210, 225, 230*
*Co-requisite: SOWK 235*

**SPCH 207**
**Developing Professional Speaking Skills**
*3 credits, 3 hours lecture*
This second-year communications course focuses on the development of students' skills in speaking to a variety of audiences. Students will apply principles of communication theory to plan effective presentations and to present technical information in a professional and polished manner. In addition, they will practice using current technology to support oral communication skills, and they will adept presentation techniques for different listeners and situations.
*Prerequisite: WRITE 103*

**SPE 005**
**Advanced Communication**
*2 credits, 2 hours lecture*
This is a continuation of COM 005. Students will learn to enhance the communication skills introduced in COM 005. They will practice giving and receiving information clearly in home, school and workplace. They will learn to give short presentations. They will work on their assertiveness skills and increase their self-esteem. Personal rights and responsibilities will also be dealt with.

**STAT 141**
**Introduction to Statistics**
*3 credits, 3 hours lecture*
This course covers: random variables and frequency distributions, averages and variance, the binomial and normal distribution and elementary inference, the X2 test for contingency tables, regression and correlation, and analysis of variance.
*Prerequisite: MATH 30-1 or permission of the Program Chair*

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**STAT 151**
**Introduction to Applied Statistics I**
*3 credits, 3 hours lecture, 2 hour lab*
An introduction to descriptive statistics (including histograms, stem-and-leaf plots, and box plots), elementary probability, the binomial distribution, the normal distribution, sampling distributions and the central limit theory. An introduction to inferential statistics including estimation of population parameters and confidence intervals for means, hypothesis testing including both one and two sample tests, paired comparisons, one-way analysis of variance, chi-square test, correlation and linear regression analysis.
*Prerequisite: MATH 30-1 or MATH 30-2*

**STR 005**
**Stress and Time Management Skills for School and the Workplace**
*2 credits, 2 hours lecture*
Students will learn how to: organize their time, tell what should be done first, see how time can be wasted, and make up and use lists. Students will learn how to apply their skills to home, work and school. They will also learn how to identify effects of stress and learn some stress management techniques.

**SUR 005**
**Academic Survival Skills**
*2 credits, 2 hours lecture*
Students will learn how to: take tests, make notes, do research, and do homework. The SQ3R method will be taught. Students will learn how to control test-anxiety. Students will learn how to apply these skills in their courses.

**WRITE 103**
**Scientific Writing**
*3 credits, 3 hours lecture*
This course provides intensive writing practices to help students improve their ability to communicate clearly in writing. By studying examples and applying principles of scientific writing to a variety of contexts, students will develop their skills in writing expository, analytical, technical, and persuasive prose. They will also learn to analyze and evaluate argumentation and to apply those skills to their own written and oral presentations.
*Prerequisite: ENGL 30-1*

**ZOOL 250**
**Survey of the Invertebrates**
*3 credits, 3 hours lecture, 3 hours lab*
Invertebrate species constitute over ninety-five percent of the animal kingdom. The functional anatomy and life cycles of the major invertebrate taxa are examined in this course. Evolutionary histories and the relationships between the various groups are emphasized.
*Prerequisite: BIOL 108*