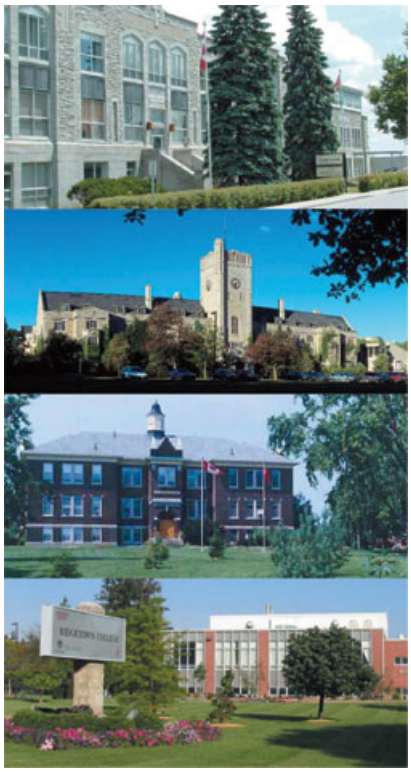
2005-2006 Diploma Program Calendar



The information published in this Diploma Calendar outlines the rules, regulations, curricula, programs and fees for the 2005-2006 academic year, including the Summer Semester 2005, the Fall Semester 2005 and the Winter Semester 2006.

For your convenience the Diploma Calendar is available in PDF format.

If you wish to link to the Diploma Calendar please refer to the Linking Guidelines.

Collège d'Alfred

Kemptville College

Agricultural College

Ridgetown College

The University is a full member of:

- The Association of Universities and Colleges of Canada

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Disclaimer

University of Guelph 2005

The information published in this Diploma Calendar outlines the rules, regulations, curricula, programs and fees for the 2005-2006 academic year, including the Summer Semester 2005, the Fall Semester 2005 and the Winter Semester 2006.

The University reserves the right to change without notice any information contained in this calendar, including any rule or regulation pertaining to the standards for admission to, the requirements for the continuation of study in, and the requirements for the granting of degrees or diplomas in any or all of its programs. The publication of information in this calendar does not bind the University to the provision of courses, programs, schedules of studies, or facilities as listed herein.

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Table of Contents

XII. Course Descriptions

General Information

Subject Area and Alpha Course Prefix Index

ALPHA COURSE PREFIX	SUBJECT AREA
DAGR	Agriculture and Equine Studies
DENM	Environmental Management
DFN	Food, Nutrition and Risk Management
DHRT	Horticulture
DTM	Turfgrass Management
DVT	Veterinary Technology
FREE	Associated Program Requirements

General Information

Course Labeling and Levels

Each course is identified by a two-part code. The first part of the code refers to the subject area, the second to the level of the course. Thus, the course DAGR*3100 is a course in the subject area of Agriculture and Equine Studies (DAGR*XXXX), and is of a level that places it among courses in the 3000 series. The series 1000, 2000, 3000 and 4000 numbers are intended to indicate progressively more demanding content, and correspondingly increasing competence on the part of the students enrolled in the course. Courses in the 1000 series are mainly for first semester students, those in the 2000 series are mainly for second semester students, and those in the 3000 series are for third semester students. Similarly, courses in the 4000 series are mainly intended to be taken by students in the fourth semester of Associate Diploma programs.

It is important that students planning their courses have clearly in mind the significance of these numbers so that they may guard against undertaking course work at levels for which they are insufficiently prepared. A number of courses have stated prerequisites which are prior requirements for entry to the course. Students who do not satisfy course prerequisites, or who, in the opinion of the instructor, do not possess an equivalent background to that of the stated prerequisites, are not eligible to enroll in the course. When some specific background is desirable but not required, the course description will include a statement of recommended background. It is understood that the instructor may accept equivalent courses from other institutions in place of the stated prerequisites. Students who wish to enroll in courses for which they do not have the stated prerequisite(s) must obtain instructor approval as outlined in Section VIII in this Calendar.

Course Information

The letters S, F, W indicate the University's intention to offer the course in the Summer (S), Fall (F) or Winter (W) semester during the academic year covered by this Calendar. Although courses normally will be offered in the semester indicated, students preparing their course programs are advised to consult the Undergraduate Course Timetable. The University cannot guarantee that all courses will be offered in the exact semester indicated.

The letter U indicates that an intended offering has not been assigned to the course. Students should consult the Undergraduate Course Timetable on WebAdvisor <https://webadvisor.uoguelph.ca/> or contact the departments offering those courses to determine the semester offerings.

The figures in parentheses ( ) following the semester designation are a general guide to the lecture and laboratory contact hours per week, the first digit being the number of lecture hours and the second, the number of laboratory hours. The credit weight for each course appears in brackets [ ]. A credit weight of [0.50] indicates 10-12 student effort hours, including class time, on academic tasks associated with the course.

Detailed course descriptions are maintained at the office of the department offering the course. Some courses, designated "Experiential Learning" courses in the Calendar description, are deliberately designed to accommodate the need to grant academic credit for experiential learning external to regular courses, in such contexts as co-operative education, field observation/job shadowing, internship/externships, practica, service learning, or work study (and other approved experience). Prior approval for admission to these courses must be obtained from the department and instructor concerned.

Course Prerequisites

In lists of course prerequisites, "or" conditions are spelled out explicitly, but "and" conditions are indicated with a comma ",". For example: "DAGR*1200, DAGR*1300, DAGR*2200" means "DAGR*1200 and DAGR*1300 and DAGR*2200".

Course Equates and Restrictions

Equates

Equate indicates a course identical to the one under which it is listed. The course may have been re-numbered or may be cross-listed under two subject areas. **Students will not be permitted to register in equated courses.**

Restrictions

Restriction indicates sufficient over-lap in content that the course under which it is listed may not be taken if the student already has credit for the course identified as the restriction. Students will not be permitted to register in restricted courses.

Language of Instruction

Classes at Guelph, Kemptville and Ridgetown are offered in English only; classes at Alfred in French only.

Agriculture and Equine Studies

DAGR*1000 Livestock Systems F (3-0) [0.50]

Students will gain an overall understanding of the livestock industry, focusing on major production issues and future challenges. Examples from various livestock production systems will be highlighted.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*1200 Applied Plant Science F (3-2) [0.50]

This course covers the basic structure and function of plants and the major functions involved in growth and reproduction as they relate to the production of plants. Topics to be discussed will include: plant processes such as photosynthesis, respiration, transpiration, nutrient uptake and reproduction, basic genetic principles, basic chemistry and the relationship and importance of plant science to the agricultural and horticultural industry.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*1250 Identification of Herbs and Aromatic Plant F (3-3) [0.50]

This course provides an introduction to the identification of herbs and aromatic plants. Students will learn to identify plants botanically through main family description, based on anatomy of the harvested plant parts and according to their biochemical constituents. Botanical and common names will be presented and identification of species will be done at several stages of growth. Economic parts of the plants, harvest timing, therapeutic potential, growth cycle, winter hardiness, and growth requirements will be discussed.

Location(s): Alfred

DAGR*1300 Soil Principles F (3-2) [0.50]

This course includes origin and classification of soils, identification and importance of major soil types, identification of primary and secondary nutrients and how they are supplied, composition of soil including minerals, water, air, organic matter and biological organisms and how they interact and the importance of soil as a resource.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*1350 Agricultural Mechanization and Safety F (3-2) [0.50]

The course will cover the operating principles and components of tractors and equipment for tillage, planting, and the application of chemicals and fertilizers and harvesting. The course will emphasize safety in all aspects of the operation of agricultural equipment.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*1500 Spanish Conversation F (2-2) [0.50]

Students will learn the basis of spoken Spanish and develop the ability to communicate in this language. Basic Spanish vocabulary will be introduced. Communication exercises, group discussion and oral presentations will be used.

Location(s): Alfred

DAGR*1600 Applied Mathematics F (3-2) [0.50]

This course is designed to augment mathematics skills necessary to compete in today's business environments. Typical applications are chemical rate conversions, solutions and mixtures, elementary algebra and financial topics. The aim is to teach how to solve actual mathematical problems encountered in the day-to-day operation of agricultural/horticultural/environmental operations.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*1610 Computer Applications F,W [0.50]

Students will become acquainted with a computer and its operating systems and applications, such as word processing and spreadsheets. Students will also learn about basic Internet access hardware, such as modems, and how to use computer communications applications such as electronic mail, and World Wide Web browsers to access information relevant to the agriculture and food system.

Restriction(s): CIS*1000
Location(s): Alfred, Kemptville

DAGR*1620 Computer Applications - Part I F (1-2) [0.25]

Students will become acquainted with college computer systems including e-mail and file management and as well, the Internet as a research tool. Students will become proficient at using Microsoft Word to complete their assignments for all of their courses and gain an understanding of how a word processor can be a helpful tool in agri-business.

Location(s): Ridgetown, Kemptville

DAGR*1720 Communication Skills - Part I F (1-1) [0.25]

Students will develop their command of written language skills. Practical skills include writing business letters and other business correspondence, formal and informal reports, instructional writing, critical thinking and critical writing. Students will also learn study, test taking and research skills.

Location(s): Ridgetown, Kemptville

DAGR*1740 Coaching and Horsemanship Techniques I F (2-4) [0.50]

This course is designed to meet the needs of students planning to instruct clients and compete at an intermediate level post graduation. Students will apply theoretical coaching and teaching techniques in a practical setting and participate in labs with coaches who will provide them with the guidance necessary to improve their equitation and training skills. This course also includes participation in clinics, judging competitions, lessons, and show ring competition.

Restriction(s): registration in the first or second year of the Agriculture program
Location(s): Kemptville

DAGR*1750 Coaching Techniques W (1-2) [0.50]

This course meets the needs of students planning to instruct students at riding academies or free lance. Students will learn and apply the format of the lesson plan as outlined by the Coach Equestrian Federation to their peers. This course also offers information on the role of the coach, designing goals and objectives, conditioning the athlete, and responsibilities of the coach.

Prerequisite(s): DAGR*2800, DAGR*2820 , DAGR*3810, DAGR*3820
Location(s): Kemptville

DAGR*1800 Equine Anatomy and Physiology F (3-1) [0.50]

This course encompasses the gross anatomy and physiology of the horse. The course includes an introduction to anatomical terminology, the integumentary system, skeletal system, muscular system, urinary system, cardio-vascular system, the respiratory system, the digestive system and the endocrine system. This course includes a lab and theory component and will help prepare the Equine students for the more practical courses offered in later semesters.

Location(s): Kemptville

DAGR*1850 Western Horsemanship I F,W (1-2) [0.50]

Western horsemanship will teach the basic theory and practical skills of Western riding. This course corresponds to the rider preparation levels set out by the Canadian Equestrian Federation with an emphasis on safety. Students will be grouped with respect to their competence and instructed accordingly.

Location(s): Kemptville

DAGR*2000 Animal Science W (3-2) [0.50]

This course includes the biological principles applicable to the animal sciences with modules on growth, carcass composition, nutrition, reproduction, genetics and health.

Prerequisite(s): DAGR*1000
Location(s): Alfred, Kemptville, Ridgetown

DAGR*2100 Marketing and Policy W (3-0) [0.50]

Students will learn basic economic concepts, the determinants of process and markets for Canadian agricultural, horticultural and food products, price support, stabilization and trade policies. Marketing systems will be discussed in detail.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*2110 Business Accounting W (2-4) [0.50]

Students will learn basic accrual accounting principles applicable to the agri-food industry. An understanding of the interrelationship of the balance sheet, income statement, cashflow and statement of change in financial position will be emphasized. Students will learn to use computer accounting software.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*2200 Crop Management I W (3-2) [0.50]

The production and management of cereals and forages is discussed. Topic areas include variety and species selection, soil fertility management, planting dates, row widths, seeding rates, pest management systems, harvesting, drying and storage as applicable.

Prerequisite(s): DAGR*1200, DAGR*1300
Location(s): Alfred, Kemptville, Ridgetown

DAGR*2210 Applied Weed Science F,W (3-2) [0.50]

Weeds will be studied in relation to agricultural practices. Principles of cultural, biological, and chemical control will be outlined. Laboratories will include weed identification and weed control methods.

Prerequisite(s): DAGR*1200
Location(s): Alfred, Kemptville, Ridgetown

DAGR*2220 Viticulture and Oenology W (2-3) [0.50]

This course introduces students to the history of grapes and grape production in Ontario, environmental factors which affect grape production in a cool climate, and practices for establishing and managing a vineyard in the context of producing high-quality wines. It will also provide an overview of the history of winemaking, wines produced in Ontario and other wine-producing regions of the world, and an introduction to the principles and making the various standard types of wine.

Restriction(s): Student must be of legal drinking age.
Location(s): Ridgetown

DAGR*2240 Crop Management (Equine) W (3-2) [0.50]

The identification, production and management of cereals and forages is discussed with a focus on the horse as a forage and cereals consumer and appropriate production and management techniques for the equine facility land manager. Topic areas include variety and species selection, soil fertility management planning dates, row widths, seeding rates, pest management systems, harvesting, drying and storage as applicable. Current research information is integrated.

Location(s): Kemptville

DAGR*2270 Mushroom Production W (2-3) [0.50]

The principles of mushroom production will be revealed in this hands-on course. Students will culture and manage two full cropping cycles at the in-house facility, learning how to fill, water, operate computerized controls and harvest their crop area. Topics include Phase I and II composting techniques and nutrient supplementation. This course is designed for those with a casual interest and for those who wish to enter commercial production.

Location(s): Ridgetown

DAGR*2290 Agricultural Chemicals and the Environment W (3-2) [0.50]

Same as DAGR*2280 except that in addition, students will register for the laboratory on the principles of safe handling and effective use of pesticides in agricultural and landscape situations. (Last offering 2003-2004 academic year.)

Restriction(s): DHRT*4050

DAGR*2350 Field Crop Equipment W (2-2) [0.50]

This course examines common equipment used for planting, spraying and harvesting of corn, soybeans and small grains. Identification, operation, adjustment, maintenance and calibration of the equipment will be covered. The student will develop the skills and knowledge to be able to adjust and calibrate the equipment for efficient field operations. A focus on the environmental impact of spraying will also be discussed. This course will emphasize safety in all aspects of the safe operation of agricultural equipment.

Location(s): Ridgetown

DAGR*2360 Machinery Maintenance W (1-3) [0.50]

This course gives the student the basics in agricultural equipment repairs. A very practical and hands-on approach will be used, with an emphasis on the safe use of tools and shop safety.

Prerequisite(s): DAGR*1350
Location(s): Alfred (Offered even-numbered years only), Kemptville, Ridgetown

DAGR*2370 Small Engines W (1-3) [0.50]

Operation, adjustments, maintenance and safety of two- and four-stroke small engines used in the agricultural industry will be covered. This course will emphasize hands-on learning with actual engines.

Location(s): Alfred (Offered odd-numbered years only), Kemptville, Ridgetown

DAGR*2400 Organic Plant Production W (3-2) [0.50]

Students will learn to apply a management program and marketing techniques to organic plant production. This course will cover the identification of the major biological crops in horticulture and cash crop systems in field and greenhouses. Companion planting, weed control and pest management particular to organic plant production will be reviewed. Marketing and certification of organic products will be discussed.

Location(s): Alfred (Offered odd-numbered years only)

DAGR*2450 Production of Herbs and Aromatic Plants Under Shelter W (3-2) [0.50]

Students will learn herb and aromatic plant production techniques involved in greenhouse and shadehouse environments. Sexual and asexual multiplication techniques pertinent to herbs and aromatic plants will be discussed. Harvesting and government regulation involved with native plant material will also be discussed.

Prerequisite(s): DAGR*1200, DAGR*1250
Location(s): Alfred (Offered even-numbered years only)

DAGR*2500 International Development W (2-3) [0.50]

Students will be able to discuss concepts in international development, including rural and social development, as well as Canadian involvement internationally. Students will meet people involved in international development, contact development organizations, and study specific developing countries.

Prerequisite(s): 5 semester courses
Location(s): Alfred

DAGR*2580 English as a Second Language W (2-2) [0.50]

Students will learn basic English as a second language and develop communication skills in that language. Basic language vocabulary will be introduced. A diagnostic pronunciation exercise will be given at the beginning and at the end of the course so that students can actively work on improving their pronunciation skills. Pronunciation areas such as tense and lax vowel production, linking, stress, and intonation, problematic consonants and information focus will be addressed. The course will emphasize oral communication skills through practical communication exercises, group discussions, dialogue work, oral presentations and listening comprehension activities.

Prerequisite(s): Language assessment by interview or exam according to the course instructor
Location(s): Alfred

DAGR*2600 Communication Skills F,W (3-2) [0.50]

Students will develop their command of language skills and learn and/or practice practical applications such as letter, memo, and report writing, resume writing and revision. Students will also learn how to present persuasive and informative oral presentations and how to incorporate audio-visual aids in effective communications.

Location(s): Alfred, Kemptville

DAGR*2620 Computer Applications - Part II W (1-1) [0.25]

Students will become proficient using microsoft Excel to complete spreadsheets and graphs. Topics include using a spreadsheet for budgeting and financial tracking. Students will also become proficient using Microsoft PowerPoint to complete presentations for other courses and gain an understanding of how this program can be a useful tool in agri-business.

Location(s): Ridgetown, Kemptville

DAGR*2650 In-Service Training W (1-2) [0.25]

Students will develop their oral communication and presentation skills. Students will learn how to present and deliver a variety of information and persuasive oral presentations to their classmates. Students will also learn about resume writing and interview skills.

Prerequisite(s): DAGR*1720
Location(s): Alfred

DAGR*2720 Communication Skills - Part II W (1-2) [0.25]

Students will develop their oral communication and presentation skills. Students will learn how to present and deliver a variety of information and persuasive oral presentations to their classmates. Students will also learn about resume writing and interview skills.

Prerequisite(s): DAGR*1720
Location(s): Ridgetown, Kemptville

DAGR*2740 Coaching and Horsemanship Techniques II W (2-4) [0.50]

This course continues to develop coaching and equitation skills. Students will apply theoretical coaching and teaching techniques in a practical setting to their colleagues and be introduced to instruction with outside clients. Clinics, judging opportunities and riding instruction, and show ring competition continue to be available to the student to improve their equitation and training skills.

Prerequisite(s): DAGR*1740
Restriction(s): registration in the first or second year of the Agriculture program
Location(s): Kemptville

DAGR*2800 An Introduction to the Horse Industry W (3-0) [0.50]

This course introduces students to the many disciplines within the horse industry.

Location(s): Kemptville

DAGR*2810 Stable Management I F,W (1-5) [0.50]

Students will be introduced to the elements and importance of stable facility management.

Location(s): Kemptville

DAGR*2820 Change to Stable Management II W (1-4) [0.50]

This course includes the daily and specialized care of the horse and stable. A portion of the course will cover designing farm layout, ventilation, fencing, and service of equipment in and around the stable.

Prerequisite(s): DAGR*2810
Location(s): Kemptville

DAGR*3000 Beef Production F (3-2) [0.50]

Beef cow-calf and feedlot operations are examined, including crossbreeding and pure breeding programs, along with management of the cow-calf herd. The feedlot sections deal with ration formulation, feedlot management, meat quality, marketing and health protection.

Prerequisite(s): DAGR*2000
Location(s): Alfred, Kemptville, Ridgetown

DAGR*3010 Dairy Production F (3-2) [0.50]

Students will undertake a study of dairy management systems. Topics will include housing systems, nutrition and feeding programs, sire selection and breeding programs, herd health and milk marketing strategies.

Prerequisite(s): DAGR*2000
Location(s): Alfred, Kemptville, Ridgetown

DAGR*3020 Livestock Evaluation F,W (2-2) [0.50]

Students will be exposed to the physical and performance evaluation of dairy, beef, swine, sheep and horses. Carcass evaluation of beef, sheep and swine is also a component. Students will develop skills in livestock judging, and giving oral and written reasons.

Prerequisite(s): DAGR*2000
Location(s): Alfred, Kemptville

DAGR*3030 Sheep Production F (3-2) [0.50]

Sheep production is studied with examples from Ontario and around the world. The major topics include production systems in Ontario, breeding, nutrition, reproduction, health and welfare and products from sheep.

Prerequisite(s): DAGR*2000
Restriction(s): DAGR*4040
Location(s): Kemptville

DAGR*3040 Pork Production F (2-3) [0.50]

This course will provide students with the opportunities to learn both the principles and the skills necessary to manage and care for pigs according to industry standards. Case studies will be used to help studetns develop the skills necessary to assess farm related pork management problems.

Prerequisite(s): DAGR*1000, DAGR*2000
Location(s): Ridgetown

DAGR*3050 Livestock Production Techniques F (3-2) [0.50]

Students will put into practice theory studied in a variety of areas including colostrum management, feeding, animal restraint and safety, implanting, castration, dehorning, injection techniques, livestock medicine protocols, reproductive techniques, milking equipment maintenance, milk quality and processing, mastitis prevention/treatment

Location(s): Alfred, Kemptville

DAGR*3100 Business Management F (1-4) [0.50]

An examination of management decision-making processes using financial statements, budgets, business records, computerized enterprise budget programs, investment analysis, machinery management and income tax regulations.

Prerequisite(s): DAGR*2110
Location(s): Alfred, Kemptville, Ridgetown

DAGR*3110 Business Finance F (3-0) [0.50]

Students will learn the types of business organizations, methods of financing long- and short-term capital requirements, taxation implications, dividend policies, budgeting and financial reorganization.

Prerequisite(s): DAGR*2110
Location(s): Ridgetown

DAGR*3120 Business Marketing F (3-0) [0.50]

An introduction to the marketing concept including the people and the activities involved in the distribution of goods and services from the producer to the consumer. Specific topics include choosing effective channels of distribution, developing the advertising program, pricing the product and salesmanship.

Prerequisite(s): DAGR*2110
Location(s): Alfred, Kemptville, Ridgetown

DAGR*3130 Sales and Sales Management F,W (2-1) [0.50]

An overview of personal selling in today's business environment with particular emphasis on skills needed to present an effective sales presentation. Buyer motivation and behaviour will be discussed along with managing time and sales territories.

Location(s): Alfred (Offered in even-numbered years only), Kemptville, Ridgetown

DAGR*3140 Creating Your Business F (2-2) [0.50]

Students will undertake a comprehensive study of the structure, operation and economics of a commercial enterprise associated with the agriculture and food system and take the first steps in creating a business.

Prerequisite(s): 5.00 credits
Location(s): Alfred

DAGR*3200 Crop Management F,W (3-2) [0.50]

Management systems for the production of corn, soybeans, canola and edible beans will be presented. Specific topics include variety and species selection, row widths, seeding rates, planting dates, fertility, pest management, harvesting and storage. Current research information is discussed in relationship to production practices.

Prerequisite(s): DAGR*1200, DAGR*1300
Location(s): Alfred (Offered in even-numbered years only), Kemptville, Ridgetown

DAGR*3210 Insect and Disease Management F,W (3-2) [0.50]

The identification, biology and control of insects and diseases of field and horticulture crops are presented. Control measures and the benefits and limitations of agricultural chemicals will be examined

Prerequisite(s): DAGR*1200
Location(s): Alfred, Kemptville, Ridgetown

DAGR*3250 Fruit Production F,W (2-3) [0.50]

Management systems for the major fruit crops in Ontario including apple, peaches, cherries, strawberries, grapes, raspberries, and related crops are discussed. Topics include climatic and soil conditions, cultural management, pruning and training.

Location(s): Kemptville, Ridgetown

DAGR*3260 Vegetable Production F,W (2-3) [0.50]

This course includes commercial production and management of the major fresh market and processing vegetable crops grown in Ontario. Topics discussed will include site selection, soil conditions, establishment, cultural practices, harvesting, post-harvest handling and marketing.

Location(s): Kemptville, Ridgetown

DAGR*3300 Land and Water Stewardship F (2-2) [0.50]

This course will examine the extent and quality of soil and water resources and their relationships in agriculture. It will explore sustainable techniques for managing soil and water resources. Students will explore integrated strategies for the long-term land stewardship of soil and water resources.

Prerequisite(s): DAGR*1300
Location(s): Alfred, Kemptville

DAGR*3350 Welding F (0-3) [0.50]

This is a laboratory course designed to enable students to safely handle and operate general welding equipment. Welding theory will be given during class time.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*3360 Grain Elevator Equipment and Feed Formulation F (3-2) [0.50]

This course examines equipment commonly used by agri-business firms to handle, clean, move, dry, store, grind, mix, and process grain, feed ingredients, and fertilizer. Balancing rations and least-cost ration formulation will also be discussed.

Location(s): Kemptville, Ridgetown

DAGR*3400 Organic Fertilization F (3-2) [0.50]

Students will learn to develop an organic fertilization program using the proper amendments toward improving yield and soil life. An understanding of soil organic matter, organisms and microbial life will be developed. The use of green manures, animal manures, sludges, composts and other sources of nutrients will be covered. Conversion from traditional farming to organic production and certification will be discussed.

Location(s): Alfred

DAGR*3500 Agricultural Extension and International Communication F (3-3) [0.50]

Students will apply group dynamics techniques and practice group facilitation, problem solving and decision making as it relates to international development. Students will prepare an agricultural extension program and propose program evaluation techniques. Students will plan a work placement in a developing country and demonstrate an understanding of the cultural adjustments required.

Prerequisite(s): DAGR*2500
Location(s): Alfred

DAGR*3510 Experiential Learning in Agriculture S,F,W [0.50]

Student-initiated learning opportunities can be developed as a credit course in consultation with a supervising faculty member. Details of the activities included in the program will be outlined in a learning contract initiated by the student and agreed to by the faculty supervisor prior to the commencement of the work experience.

Prerequisite(s): 4.00 credits, registration in the Diploma Program in Agriculture
Restriction(s): DAGR*3880 , DFN*3510, DHRT*3510
Location(s): Alfred, Kemptville, Ridgetown

DAGR*3550 Dry Tropics Agriculture F (3-2) [0.50]

The course gives the student an in-depth appreciation of living conditions (climate, local foods, social structure), major crops, livestock production and the soil conservation practices adapted to the dry tropics.

Prerequisite(s): DAGR*1200, DAGR*1300
Location(s): Alfred (Offered in alternate years)

DAGR*3700 Agroforestry F (1-2) [0.50]

The course focuses on basic tree identification, tree growth and development and the value and potential of trees and woodlands on farms. It also provides instruction regarding farm woodlot management for a variety of objectives including timber, maple syrup, shelterbelts.

Location(s): Alfred

DAGR*3720 Coaching and Horsemanship III F (2-4) [0.50]

This course continues to meet the needs of students planning to instruct clients and compete at an intermediate level post graduation. Students will apply theoretical coaching and teaching techniques in a practical setting and participate in labs with coaches who will provide them with the guidance necessary to improve their equitation and training skills. Clinics, judging competitions, equitation instruction, competition exposure and Rider Level testing in accordance with the Canadian Equestrian Federation (C.E.F.) standards continue to be an integral part of the program.

Prerequisite(s): DAGR*1740, DAGR*2740
Location(s): Kemptville

DAGR*3810 Horse Conformation and Lameness F (3-1) [0.50]

Upon completion of this course the student will be able to evaluate a horse's conformation, relate form to function and develop an understanding of the common lameness and blemishes found in horses and their relationship to athletic performance.

Prerequisite(s): DAGR*2810
Location(s): Kemptville

DAGR*3820 Horse Feeds and Feeding F (2-1) [0.50]

This course introduces students to the topics of digestion, feed nutrients, feed stuffs and feeding practices for horses.

Prerequisite(s): DAGR*2810
Location(s): Kemptville

DAGR*3850 English Horsemanship II F,W (1-2) [0.50]

With emphasis on safety, this course continues the development of riding skills from English Horsemanship I to produce an independent, thinking rider focused on the development and training of the horse. Students will be grouped with respect to their competence and will advance accordingly.

Prerequisite(s): DAGR*1850
Location(s): Kemptville

DAGR*3860 Western Horsemanship F,W (1-2) [0.50]

This course continues the basic theory and practical skills of Western riding that began in DAGR*1860. This course corresponds to the rider preparation levels set out by the Canadian Equestrian Federation, with emphasis on safety. Students will be grouped with respect to their competence and will advance accordingly.

Prerequisite(s): DAGR*1860
Location(s): Kemptville

DAGR*3900 Special Project S,F,W (0-0) [0.50]

A self-directed student project focusing on a topic of academic and/or practical interest to the student. The student will identify and propose a detailed course outline to be reviewed and approved by the faculty supervisor prior to the commencement of the project. The project could include a research assigment, a literature review, a hands-on assignment with specific learning objectives and milestones for achieving these objectives.

Prerequisite(s): 3.00 credits, registration in the Diploma in Agriculture program, written permission of the faculty supervisor
Restriction(s): DAGR*3910 , DFN*3910, DHRT*3910
Location(s): Alfred, Kemptville, Ridgetown

DAGR*3920 Applied Biochemistry F (3-1) [0.50]

This course is an introduction to the fundamental concepts of biochemistry. The basics of biochemistry are taught with an emphasis on interrelating physiological, chemical, nutritional and pharmacological processes of animals. Topics include organic chemistry, basic chemistry of biological compounds and metabolism.

Location(s): Kemptville

DAGR*3930 Equine Alternative Therapies F (2-1) [0.50]

This course covers the alternative therapies available to a horse care-giver or equine manager in the therapeutic or convalescent care of horses. The course includes an introduction to massage therapy, acupressure, acupuncture and herbology. As well, heat, hydro, cold and electromagnetic, ultrasonography and magnetic therapy are discussed. Case study and hands-on work will be included in the lab portion of the course.

Location(s): Kemptville

DAGR*3940 Laboratory Techniques I F (3-1) [0.50]

This course emphasizes practical laboratory techniques, utilized routinely in a laboratory setting, which assist the veterinarian in the diagnosis of disease. This course focuses on the diagnostic tests and procedures used in the areas of cytology, haematology, mycology, and radiography.

Prerequisite(s): DAGR*2010
Location(s): Kemptville

DAGR*4000 Pork and Poultry Production W (3-2) [0.50]

This course gives the student an in-depth appreciation of the important management factors affecting profitable pork and poultry production. Factors considered include: housing, breeding, feeding, reproduction, health, marketing, and enterprise economics.

Location(s): Alfred (Offered in odd-numbered years), Kemptville

DAGR*4010 Animal Health W (3-0) [0.50]

Economic animal production requires healthy livestock and this course is designed to stress animal health. Diseases important to livestock in Ontario are discussed, with emphasis being placed on prevention and control methods.

Prerequisite(s): DAGR*1000
Location(s): Alfred, Kemptville, Ridgetown

DAGR*4020 Poultry Production W (3-2) [0.50]

This course will provide students with the opportunities to learn both the principles and the skills necessary to manage and care for poultry according to industry standards. Case studies will be used to help students develop the skills necessary to assess farm related poultry management problems.

Prerequisite(s): DAGR*1000, DAGR*2000
Location(s): Ridgetown

DAGR*4040 Small Ruminant Animal Production W (3-2) [0.50]

This course includes goat and sheep production and is studied with examples from Ontario and around the world. The major topics include: production systems, breeding, nutrition, health and welfare and products.

Prerequisite(s): DAGR*1000, DAGR*2000
Location(s): Alfred (Offered alternate years)

DAGR*4050 Dairy Cattle Nutrition and Selection W (3-2) [0.50]

This course expands on the nutrition and selection principles outlined in Dairy Production. Students learn to develop practical and economical rations and feeding programs for heifer, dry and milking cows. Students complete an in-depth study of dairy selection and breeding programs through A.I. and E.T.

Prerequisite(s): DAGR*3010
Location(s): Alfred, Kemptville, Ridgetown

DAGR*4060 Alternative Animal Agriculture W (2-2) [0.50]

This course combines lectures and visits to production facilities to give the student an overview of the possibilities in the commercial production and marketing of non-traditional animal species.

Location(s): Alfred (Offered alternate years), Kemptville

DAGR*4070 Swine Reproduction and Farrowing Management W (2-3) [0.50]

A comprehensive work/study course in swine reproduction and farrowing management consisting of intensive hands-on training, field trips and skills development in breeding herd management techniques. Students registering for this course will work with the staff of the Swine Centre over the semester. Competence in practical swine breeding and farrowing management skills will be learned through hands-on activities under close supervision and guidance of professionals.

Prerequisite(s): DAGR*3040
Location(s): Ridgetown

DAGR*4080 Large Herd (Dairy) Management W (2-3) [0.50]

The large herd management course introduces students to the options available for dairy farmers that are managing large herds or considering expansion. An overview of the history of dairy farming in Ontario will be explored along with consideration as to where the industry is heading. Efficiency of labour and cow comfort will be emphasized through a detailed look at housing, milking, handling, and feeding of dairy cows. The barn environment and manure management will also be discussed.

Location(s): Kemptville

DAGR*4100 Commodity Marketing W (3-0) [0.50]

This course provides an understanding of commodity and currency price risks for corn, beans, wheat, cattle and hogs in Ontario. It includes the practical use of instruments that are available to deal with these risks and the development of an applied risk management strategy.

Location(s): Alfred (Offered alternate years only), Kemptville, Ridgetown

DAGR*4200 Cropping Systems W (2-2) [0.50]

Current and emerging crop production systems will be compared and evaluated in relationship to soil productivity, environmental awareness and the agricultural economy. Climate and weather and their impact on crop production is examined. Specialized production systems including strip tillage, seed production and organic production will be included.

Prerequisite(s): DAGR*1200
Location(s): Kemptville, Ridgetown

DAGR*4210 Crop Diagnostics and Recommendations W (2-2) [0.50]

This course provides a comprehensive study of weeds, insects and diseases of field crops. Case studies are used to develop problem-solving skills. Pest management control strategies are identified. Students will develop the skills and knowledge to assist in over-the-counter and on-farm pest management recommendations.

Prerequisite(s): DAGR*2210, DAGR*3210
Location(s): Ridgetown

DAGR*4220 Organic Production W (2-2) [0.50]

This course provides a study of the basic concepts of organic agricultural production, including production techniques in field and greenhouse crops and farm animals, produce certification, and marketing. This course will also be of interest to continuing education students who have an interest in organic food production.

Location(s): Ridgetown

DAGR*4230 Grain Grading/Seed Production W (2-2) [0.50]

This course provides students with hands-on training in grading grain and seed production. A wide range of field crops will be graded according to Canadian Grain Commission standards. Seed production and processing will be discussed from both producer and industry views. The role of organizations involved in seed production, processing and selling will be discussed.

Location(s): Ridgetown

DAGR*4240 Biodynamic Production W (2-2) [0.50]

Students will learn to apply the principles of biodynamics and other alternative methods in agriculture. The different agricultural systems will be viewed from a socio-economic perspective. The basic concepts and tools of biodynamic production will be covered. Certification and marketing of biodynamic products will be discussed. Other major trends in alternative agriculture will be presented.

Location(s): Alfred (Offered in even-numbered years only)

DAGR*4250 Post-Harvest Handling and Storage W (3-2) [0.50]

Preservation of fresh horticultural produce by cool storage techniques with emphasis on field and storage factors affecting quality will be included in this course.

Prerequisite(s): DAGR*1200
Location(s): Alfred (Offered in alternate years only), Kemptville

DAGR*4260 Advanced Vegetable Production W (2-3) [0.50]

This course will include the commercial production and management of the minor fresh market and processing vegetable crops grown in Ontario. Topics discussed include site selection, soil conditions, establishment, cultural practices, harvesting, post-harvest handling and marketing.

Prerequisite(s): DAGR*3260
Location(s): Ridgetown

DAGR*4270 Horticultural Crop Protection W (2-2) [0.50]

The biology and control of insects, diseases, nematodes, and weeds of field horticultural crops are studied. Pest control concepts including diagnostic problem solving and impacts on the environment with consideration to the safe use and storage are discussed. Use of non-chemical methods are also considered.

Location(s): Ridgetown

DAGR*4300 Processing and Storage of Herbs and Aromatic Plants W (3-2) [0.50]

Students will be able to apply processing techniques for herbs and aromatic plants and identify their main uses. Biochemical aspects of active ingredients and influence of the environment on content will be discussed. Marketing techniques pertinent to herbs and aromatic plant products will be presented.

Prerequisite(s): DAGR*1250
Location(s): Alfred (Offered in even-numbered years only)

DAGR*4310 Production of Herbs and Aromatic Plants W (3-2) [0.50]

Students will learn herbaceous and woody herb and aromatic plant production and harvesting techniques involved in field production and outdoor garden settings. Topic such as soil preparation, fertilizers, crop establishment, drainage and irrigation needs, pest control and winter hardiness and protection will be covered. The influence of environmental factors on active ingredients and plant quality will be discussed. Government regulations and industry standards for organic certification will be presented.

Prerequisite(s): DAGR*1200, DAGR*1250, DAGR*1300
Location(s): Alfred (Offered in odd-numbered years only)

DAGR*4350 Farm Structures and Environment W (3-2) [0.50]

Students will be provided with an introduction to basic engineering principles related to livestock facilities and their environment. Students will gain a basic understanding of how to initiate the planning of a livestock structure or an environmental control system, including ventilation and manure storage. As part of a major assignment, students will perform an environmental analysis of an actual farm.

Location(s): Alfred (Offered in odd-numbered years only), Kemptville, Ridgetown

DAGR*4400 Organic Animal Production W (3-2) [0.50]

Students will learn to apply a management program and marketing techniques to organic animal production. This course will cover animal welfare, animal management as related to organic production, nutrition, animal health and an organic approach to alternative medicine. Performance evaluation, marketing and certification of organic animal products will be discussed.

Location(s): Alfred (Offered in even-numbered years only)

DAGR*4500 Developing Country In-Service Training S [0.50]

This work study course provides an in-depth appreciation of the living and working conditions in the agricultural environment of a developing country. Students are able to share their knowledge with that of the people in the receiving country at the same time as they experience a cross-cultural experience.

Prerequisite(s): 10.00 credits
Location(s): Alfred

DAGR*4550 Humid Tropics Agriculture W (3-2) [0.50]

The course provides an in-depth appreciation of the living conditions (climate, local foods and a representative social structure of Cameroon or Ecuador), major crops, livestock production and soil conservation practices adapted to the humid tropics.

Prerequisite(s): DAGR*1200, DAGR*1300
Location(s): Alfred (Offered in alternate years only)

DAGR*4600 Human Resource Management F,W (3-2) [0.50]

Students will learn the theoretical and practical skills of management and interacting with people. Topics will include recruiting, supervising, motivation, training employees, effective listening, dealing with difficult people, group dynamics and leadership skills.

Location(s): Alfred, Kemptville, Ridgetown

DAGR*4610 Business Project W (2-4) [0.50]

Students will identify a viable product or service, and will undertake a comprehensive study of the technical and economic aspects of a business designed to sell that product. Students will acquire basic information about the product, define their business and develop a business plan.

Prerequisite(s): 7.50 credits
Location(s): Alfred, Kemptville, Ridgetown

DAGR*4620 Farm Project W (2-4) [0.50]

Students will undertake a comprehensive study of the technology, operation and economics of an agricultural production enterprise. The students will be responsible for acquiring basic information about the enterprise, analyzing its strengths and weaknesses and developing a management plan.

Prerequisite(s): 7.50 credits
Location(s): Alfred, Kemptville, Ridgetown

DAGR*4630 Internet and Web Page Design W (1-3) [0.50]

Students will learn about the historical development of the Internet, the rules and regulations that govern the Internet and the proper application procedures for use of Web resources such as domain names and IP addresses, and how to create web pages in Hypertext Markup Language. Topics covered include: creating, editing and linking documents; controlling text layout using lists, line breaks, and tables; adding graphics and multimedia to a web document; creating tables and frames, adding information to mak the web site ready for search engines submission. Effective design techniques, basic graphic design principles, and cross-platform issues will also be included.

Location(s): Ridgetown

DAGR*4640 Leadership Skills Development F (3-0) [0.50]

This course explores leadership development as a method of taking charge by developing individual skills and knowledge to deal with changing needs and issues arising from community, provincial, national and international perspectives.

Location(s): Alfred

DAGR*4700 Advanced Agroforestry W (1-3) [0.50]

This course provides more advanced level training in farm woodlot management; specialized aspects of agroforestry (i.e. maple syrup) will be covered in more depth than at the introductory level. Major emphasis will be placed on student assignments including development of a farm woodlot plan.

Prerequisite(s): DAGR*3700
Location(s): Kemptville (Offered in odd-numbered years only)

DAGR*4720 Coaching and Horsemanship Techniques IV W (2-4) [0.50]

This course continues from Coaching and Horsemanship Techniques III to meet the needs of students planning to instruct clients and compete at an intermediate level post graduation. Students will apply theoretical coaching and teaching techniques in a practical setting and participate in labs with coaches who will provide them with the guidance necessary to improve their equitation and training skills. Clinics, judging competitions, instruction, competition exposure and rider level examinations according to the Canadian Equestrian Federation (C.E.F.) standards continue to be an integral part of the program. C.E.F. Coaching level 1 evaluations and examinations will be set up to accommodate students where numbers warrant.

Prerequisite(s): DAGR*1740, DAGR*2740, DAGR*3720
Location(s): Kemptville

DAGR*4800 Equine Conditioning W (2-1) [0.50]

Students will learn to define exercise and understand the importance of conditioning a horse both physically and mentally. Students will also practice developing and monitoring a fitness program and illustrate methods to monitor fitness levels during training.

Prerequisite(s): 7.50 credits
Location(s): Kemptville

DAGR*4810 Horse Health W (3-1) [0.50]

This course focuses on equine health and diseases, the care of sick animals and other stable management practices related to the health care of horses.

Prerequisite(s): 7.50 credits
Location(s): Kemptville

DAGR*4820 Equine Reproduction and Selection W (3-1) [0.50]

This course covers the management of stallions, mares and foals. Housing and handling requirements on the breeding farm are also discussed.

Prerequisite(s): 7.50 credits
Location(s): Kemptville

DAGR*4830 Care and Management of an Equine Business W (2-2) [0.50]

This course is designed to familiarize students with the basic skills and procedures used in the management of an equine business. Topics included within this course are marketing strategies, inventory control and financial management. A one week field placement during the February break is required.

Location(s): Kemptville

DAGR*4840 Laboratory Techniques II W (3-1) [0.50]

This course emphasizes practical laboratory techniques, utilized routinely in a laboratory setting, which assist the Veterinarian in the diagnosis of disease. The course includes an equine dentistry and urinalysis component, as well as a module on pharmacology and the use of drugs in the horse industry.

Prerequisite(s): DAGR*3910
Location(s): Kemptville

Degree Level Electives

Agriculture and Horticulture Programs

As well, the programs in Agriculture and Horticulture at Guelph include one undergraduate degree level elective course. The description for this course is as follows:

ENVB*2040 Biology of Plant Pests U [0.50]

An interdisciplinary course on the nature and importance of diseases, weeds, insects and abiotic stresses on plant productivity and quality. A case history approach will be used to illustrate the biology of plant pests, the principles of pest population management, and related topics.

Prerequisite(s): BOT*1150 .

Food and Nutrition Management Program

The Food and Nutrition Management program includes two elective courses which are offered at the undergraduate degree level. The descriptions for these courses are as follows:

FOOD*2010 Principles of Food Science U [0.50]

Principles involved in the processing, handling and storage of foods. Relationship of science and technology to food processing. (Offered through distance education format only.)

Restriction(s): FOOD*2150, NUTR*2150

FOOD*2400 Introduction to Food Chemistry U [0.50]

An introduction to the chemistry and biochemistry of the major components of foods: lipids, proteins, carbohydrates and water/ice. In addition, an overview of some of the reactions and changes in food components which occur during processing, handling and storage will be presented. This course may not be taken for credit by students in specialized honours Food Science. **(Offered through distance education format only.)**

Prerequisite(s): CHEM*1040
Restriction(s): FOOD*3100

Environmental Management

DENM*1000 Environmental Science and Issues F (3-2) [0.50]

This course will expose the student to a broad range of environmental issues facing society today. The course will present the student with issues such as environmental quality and protection, the effects of industrialization and the need for conservation, global warming and the production and politics of food and its affect on the global, national, regional and local environmental quality.

Location(s): Ridgetown, Alfred

DENM*1050 Fundamentals of Government and Organizations F (3-2) [0.50]

Students will be introduced to all levels of government in Canada, the legislative process, civil administration, and election processes. It will also include a brief comparison of the Canadian application of the English Parliamentary system and the United States Congressional System. The organization of government administration and the regulatory system, quasi government agencies and how the public is involved in government decision making regarding environmental issues and legislation. Finally, a discussion of aboriginal issues and their role in the various levels of government in Canada will be covered.

Location(s): Ridgetown, Alfred

DENM*1100 Surveying and GIS F (2-3) [0.50]

This course is designed to introduce the student to the basic principles of surveying, map reading and production. They will learn how to read maps, take precise measurements, use basic survey instruments and create their own maps and site plans. Later in the course the student will be exposed to Geographic Information Systems (GIS), the Global Positioning System (GPS) and how they are used to organize and store spatial data. Finally, Remote Sensing techniques will be examined reviewing the range of technology from basic air photo interpretation to the full range of current electronic sensors utilized by the land management professionals.

Location(s): Ridgetown, Alfred

DENM*2000 Occupational Health and Safety W (3-2) [0.50]

This course provides an introduction to the topic of occupational health and safety. Topics to be covered include current Ministry of Labour Statutes and Regulations that pertain to the workplace. Students will become informed and conversant with topics including hazardous materials, hazardous chemicals, material safety data sheets, the Workplace Hazardous Materials Information System and health and safety planning.

Location(s): Ridgetown, Alfred

DENM*2050 Site Assessment W (3-2) [0.50]

Environmental site assessments are now required by lenders for mortgage purposes prior to the purchase of industrial, commercial, institutional, agricultural and residential properties. This course will provide a detailed understanding of the site assessment process and students will complete a Level 1 Site Assessment study and report as part of the course. Risk assessment, environmental auditing and the decommissioning of contaminated sites will also be explored and discussed. Case studies will provide an overview of specific site assessments and subsequent large scale Level 2, 3 and 4 site remediation.

Location(s): Ridgetown, Alfred

DENM*2100 Ecology W (3-2) [0.50]

An introduction to the science of ecology, the study of interactions between organisms and their environments. Major topics include adaptation, populations, communities, biodiversity, ecosystems and competition. The effects of climate and human activities on ecological processes are also considered. Ecological principles are used to explain the issues associated with several environmental problems.

Location(s): Ridgetown, Alfred

DENM*2100 Ecology W (3-2) [0.50]

An introduction to the science of ecology, the study of interactions between organisms and their environments. Major topics include adaptation, populations, communities, biodiversity, ecosystems and competition. The effects of climate and human activities on ecological processes are also considered. Ecological principles are used to explain the issues associated with several environmental problems.

Location(s): Ridgetown, Alfred

DENM*2150 Water Resource Management W (3-2) [0.50]

Water is a precious resource that is all-too-often taken for granted. This course will demonstrate the significance of the various elements of the hydrologic cycle (e.g. precipitation, runoff, infiltration, groundwater recharge and discharge, etc.) It will focus on water supply systems, water wastewater perspective with other jurisdictions and the world. The students will learn of common water quality problems, including causes, and pathways that contaminants follow to reach water and groundwater.

Location(s): Ridgetown, Alfred

DENM*2200 Environmental Monitoring W (3-2) [0.50]

This course will introduce the Environmental Management student to the various methods used to measure environmental impact. Students will achieve a summary understanding of the various government and other agency threshold limits and guidelines of environmental parameters such as water quality, vegetarian, terrestrial and social impact analysis.

Location(s): Ridgetown, Alfred

DENM*3000 Data Analysis and Statistics F (3-2) [0.50]

Introduction to the use of statistics in the field of environmental management. Basic concepts include probability, observations, generalization of means, normal distribution, standard deviation, standard error, sampling, principles of experimental design, use of correlation and regression, index numbers.

Location(s): Ridgetown, Alfred

DENM*3050 Environmental Law F (3-2) [0.50]

The Environmental Law course will introduce the student to the Canadian legal process and how new laws are drafted and passed and regulations developed and administered in Ontario and across Canada. The course will focus on the development of environmental legislation at both the federal and provincial levels of government and how they are administered and implemented.

Location(s): Ridgetown, Alfred

DENM*3100 Introduction to Applied Microbiology F (3-2) [0.50]

This course is designed for students in environmental studies. The importance from an environmental point of view, including water systems and soils as well as their importance in disease, nutrition, food and food processing will be emphasized.

Location(s): Ridgetown, Alfred

DENM*3150 Agriculture and Environmental Stewardship F (3-2) [0.50]

A course that examines the impact and role of farming in the agroecosystem. Lectures and case studies will be used to explore potential pathways of soil degradation and environmental contamination from agriculture, site assessment of environmental risk associated with specific farm operations and the utilization of best management practices for the conservation of soil, water and other natural resources.

Location(s): Ridgetown, Alfred

DENM*3160 Agricultural Chemicals in the Environment W (3-2) [0.50]

An introduction to the environmental, human health and economic issues associated with the use of chemicals, especially pesticides, in agriculture and landscape environments. Students will become informed and conversant on the benefits and possible risks of pests, pesticides, bio-controls and transgenic organisms that are used for pest management.

Location(s): Ridgetown, Alfred

DENM*3200 Water Treatment F (3-2) [0.50]

This course provides the student with the basic design concepts and operational techniques of industrial and municipal water treatment systems. Several treatment processes for ground and surface supplies will be discussed including optimization and testing methodologies as well as the legal requirements of water taking in Ontario. Analytical calculations pertaining to water treatment will be examined. The participants in the course will be given the opportunity to write Provincial Certification Examination for the Water Operator-In-Training classification.

Location(s): Ridgetown, Alfred

DENM*3210 Sewage & Waste Water Treatment F (3-2) [0.50]

This course covers the introductory concepts of sewage and some related industrial waste treatment. Topics covered encompass the various unit treatment mechanisms currently utilized such as the biological, chemical and physical processes, legislation, different plant configurations, solids handling and disposal, process optimization and applicable testing methodologies. Analytical calculations pertaining to sewage treatment will be examined. The participants in the course will be given the opportunity to write the Provincial Certification Examination for the Sewage Operator-In-Training classification.

Location(s): Ridgetown, Alfred

DENM*4000 Business Practices and Ethics W (3-2) [0.50]

Students will be introduced to a basic understanding of entrepreneurship and business ethics. They will learn how a business is formed and various legal structures, marketing, book keeping, public presentation skills and how to write a resume. The student will become acquainted with business planning, budgets and financial planning, proposal writing and delivery. Finally the students will study the advantages of professional designation and the rights and responsibilities that come with it.

Location(s): Ridgetown, Alfred

DENM*4050 Environmental Project W (3-2) [0.50]

This course is designed to give the student an opportunity to thoroughly review the environmental systems of an industry, municipality, agribusiness and/or agricultural enterprise. The student will complete an Environmental Management System using Gap analysis and create environmental policies and action plans.

Location(s): Ridgetown, Alfred

DENM*4100 Land Use Planning W (3-2) [0.50]

Students will become familiar with land use planning legislation and controls used in Ontario and across Canada. They will begin with the study of settlement theory and how land development effects the natural environment. The various legislative tools used to measure and control the development of land and how to understand the public's role in the process. The students will also be introduced to the higher levels of land use planning including the provincial and federal environmental assessment processes.

Location(s): Ridgetown, Alfred

DENM*4150 Sampling and Analysis W (2-3) [0.50]

This is a practical course with hands-on approach designed to increase students' confidence and competency in performing laboratory and field work. Specific skills what will be acquired in this course will include: preparing a standard operation procedure; preparing a list of analytes for study; analyzing organic contaminants and heavy metals in surface water, groundwater and sediment, and evaluating the degree of contamination; evaluating vegetative communities in various types of habitat; compiling a representative species list; performing a title search; evaluation data, including quality control data; and analyzing macro-invertebrate and fish data. Collectively, students will use their acquired knowledge to design, carry out, interpret the results and prepare comprehensive report on a selected area.

Location(s): Ridgetown, Alfred

DENM*4200 Watershed Management and Conservation W (3-2) [0.50]

Students will learn to appreciate water issues on a watershed scale. They will see the impacts of various land uses on the quantity and quality of water leaving a watershed. The course will examine not only the impacts of human habitation on a watershed but will consider the impact of the forces of nature. The dynamics of various elements of a watershed (e.g. wetlands, dams, reservoirs, riparian zones, land cover, etc) will be studied in order to understand the importance of each in the entire system.

Location(s): Ridgetown, Alfred

DENM*4210 Nutrient Management W (3-2) [0.50]

This course will examine the best management practices associated with nutrient management on farms. Emphasis will be placed on the components and development of a nutrient management plan and the safe utilization of manures and bio-solids in agricultural production systems.

Location(s): Ridgetown, Alfred

DENM*4250 Industrial Waste Management W (3-2) [0.50]

This course is designed to give the student a thorough understanding of the field of industrial wastes from a regulatory perspective. Topics include current Federal and Ontario hazardous waste statutes and regulations. The registration and manifesting of a variety of hazardous and non-hazardous industrial wastes will be explored. Waste minimization and pollution prevention strategies and methodologies will also be discussed.

Location(s): Ridgetown, Alfred

DENM*4260 Spills Response Planning W (3-2) [0.50]

The purpose of this course is to acquaint the student with the legislation and rules surrounding spills and emergency planning. The student will demonstrate the technology and techniques available and how and when it is used. The process of contingency planning and the need for Environmental Management Systems will also be covered.

Location(s): Ridgetown, Alfred

Food Nutrition and Risk Management

DFN*1020 Food Preparation and Theory F (3-5) [0.50]

This course is an introduction to the science of food. The students will study the chemical and physical properties of foods and the principles of food selection, storage, preparation and evaluation. The preservation of nutrients, colour, texture and flavour will be applied through food laboratory work and demonstrations. The students will develop the ability to recognize and produce safe quality food items

Location(s): Alfred, Kemptville

DFN*1060 Introduction to Nutrition F (4-0) [0.50]

This course introduces the nutrients - carbohydrates, fats, proteins, vitamins, minerals and water and their roles in food, nutrition and health. Students will learn Canadian dietary standards and guidelines used in nutrition care. Application of these guidelines will be practiced.

Location(s): Alfred, Kemptville

DFN*1190 Introduction to Food Processing F (4-0) [0.50]

This is an introductory course covering the principles and practices of processing milk and milk products, eggs, meat and other food products. Students will study the principles of quality assurance and Hazard Analysis Critical Control Points (HACCP), and their application to processing plant practices as well as processing standards.

Location(s): Alfred, Kemptville

DFN*1200 Safe Food Handling F (4-0) [0.50]

The importance of food microorganisms, sanitation and safety practices for the food industry are covered. Topics include: The Sanitation Code, Public Health Act, Occupational Health and Safety Act, WHMIS legislation and Workers Compensation Act. Safe food handling practices, infection control, HACCP, kitchen safety, fire safety, accident investigation and work inspection are presented.

Location(s): Alfred, Kemptville

DFN*2020 Nutrition and Health W (5-0) [0.50]

Nutrition is positioned as a significant factor affecting the health of individuals. Students will develop a basic understanding of the structure and functions of the human body. Cultural influences on food habits will be addressed as well as healthy weights and lifestyles. Nutritional needs throughout the life cycle will be examined with emphasis on the challenges presented by our aging population. Students will learn to plan menus and evaluate nutritional needs through these stages. Nutritional labeling in Canada will be introduced. Students will continue with the application of Canadian dietary guidelines learned in introductory nutrition.

Prerequisite(s): DFN*1060
Location(s): Alfred, Kemptville

DFN*2130 Food Cost Control W (4-0) [0.50]

To introduce students to inventory control, purchasing and receiving, costing of recipes and menus and basic accounting principles. Strategies for food cost control related to food purchasing, costing and budgeting are introduced.

Prerequisite(s): DAGR*1600
Location(s): Alfred, Kemptville

DFN*2140 Introduction to Food Service W (2-5) [0.50]

This course will provide the students with an opportunity to participate in quantity food production and service. Skills will be developed in menu planning and design. Special attention will be given to environment/atmosphere management in food services.

Prerequisite(s): DFN*1020, DFN*1200
Co-requisite(s): DFN*2200
Location(s): Alfred, Kemptville

DFN*2200 Food Service Design and Equipment W (3-1) [0.50]

This course examines the basic principles of planning and equipping a food-service facility. Equipment selection and procurement, food service systems, work areas and blueprint reading are discussed. The safe handling of equipment will be addressed.

Location(s): Alfred, Kemptville

DFN*2250 Food Microbiology W (3-2) [0.50]

An examination of the principles of microbiology as applied to food and food sanitation is the focus of this course. Both pathological and beneficial organisms are studied. Demonstrations and laboratory exercises provide practical application.

Location(s): Alfred, Kemptville

DFN*2400 Healthy Cooking F,W (2-2) [0.50]

The student will learn about and experience methods of modifying traditional recipes to reflect healthy choices and new eating patterns

Location(s): Alfred, Kemptville

DFN*2420 Cultural Food Practices W (1-3) [0.50]

The impact of culture on food habits and cuisine is explored. Emphasis will be placed on the practical application of learning to plan menus in the multicultural Canadian context. Students will gain an understanding of food preparation techniques and ingredients used by major ethnic groups. Special attention will be given to sound nutrition and the introduction of cultural cuisine to the health and commercial food sectors.

Prerequisite(s): DFN*1020,
Location(s): Alfred, Kemptville

DFN*2440 Sensory Evaluation F (2-2) [0.50]

The principles and practices of sensory evaluation for market research, product development, quality control, and research or product selection are covered. A practical approach familiarizes students with basic methodology and statistical procedures for analyzing results.

Location(s): Alfred, Kemptville

DFN*3030 Nutrition in Health and Disease F (5-0) [0.50]

The health care environment will be introduced with an emphasis on the role of nutrition in health and disease. This course provides an understanding of the principles of nutrition assessment and the development of the nutrition care plan as a component of health care for individuals. The role of nutrition and food in the management of illness and chronic disease will be addressed as well as key functions of the human body. The application of dietary modifications and menu marking will be practiced. Students will be introduced to the case study method.

Prerequisite(s): DFN*1060, DFN*2020
Location(s): Alfred, Kemptville

DFN*3070 Food Chemistry F (1-5) [0.50]

An introduction to the chemistry of the major components of foods: carbohydrates, fats, proteins and water. The relationship between the chemical structure and the properties and behavior of foods is emphasized. Particular attention is paid to the changes in food components which occur during storage, handling and processing of foods

Prerequisite(s): DFN*1020
Location(s): Alfred, Kemptville

DFN*3200 Catering Management F (1-5) [0.50]

Students gain experience in planning, preparation, presentation and service of food in varied food service settings. Emphasis is placed on team work and food service management techniques.

Prerequisite(s): DFN*2140, DFN*2200
Location(s): Alfred, Kemptville

DFN*3510 Experiential Learning in Food and Nutrition Management S,F,W [0.50]

Student-initiated learning opportunities can be developed as a credit course in consultation with a supervising faculty member. Details of the activities included in the program will be outlined in a learning contract initiated by the student and agreed to by the faculty supervisor prior to the commencement of the work experience.

Prerequisite(s): 4.00 credits, registration in the Diploma Program in Food and Nutrition Management
Restriction(s): DAGR*3510, DAGR*3880 , DHRT*3510
Location(s): Alfred, Kemptville

DFN*3910 Special Study Project S,F,W (0-0) [0.50]

A self-directed student project focusing on a topic of academic and/or practical interest to the student. The student will identify and propose a detailed course outline to be reviewed and approved by the faculty supervisor prior to the commencement of the project. The project could include a research assigment, a literature review, a hands-on assignment with specific learning objectives and milestones for achieving these objectives.

Prerequisite(s): 3.00 credits, registration in the Food and Nutrition Management Diploma program and written permission of the faculty supervisor
Restriction(s): DAGR*3900, DAGR*3910 , DHRT*3910
Location(s): Alfred, Kemptville

DFN*4010 Advanced Nutrition in Disease W (5-0) [0.50]

Building on knowledge and skills developed in Nutrition and Disease, students will continue to study the structure and functions of the human body and nutrition-related diseases and their treatment. Emphasis placed on the nutrition care plan and specifically on the use of case studies in understanding the role of nutrition in illness and chronic disease. The application of the principles of nutrition management continues in the planning of dietary modifications and menu writing and marking. Special nutrition concerns in long term care will be addressed.

Prerequisite(s): DFN*3030
Location(s): Alfred, Kemptville

DFN*4030 Food, Beverage, Labour Cost Control F,W (4-2) [0.50]

Concepts and procedures for purchasing, receiving and storage of goods; controlling costs; pricing products and services; and managing budgets are discussed and practiced Application of basic manual and computer procedures to food, beverages and labour cost control. These topics are presented in the context of food service management but the principles are applicable to business in general.

Prerequisite(s): DFN*2130
Location(s): Alfred, Kemptville

DFN*4050 Field Placement W(160-200 hours) U [0.00]

Provides a concentrated "new" practical experience in the food industry. Students will complete a 5 week, non-paying, placement in their area of interest after the 4th semester. This placement is required to graduate and is evaluated on a pass/fail bases.

Prerequisite(s): completion of credits
Location(s): Alfred, Kemptville

DFN*4070 Advanced Topics in Food Processing F,W (4-0) [0.50]

Food processes and the relationship between chemistry, microbiology, nutrition and engineering as they apply to food processing are discussed. The following topics are included: thermal processing, novel processing, drying technology, separation technology, process monitoring and control, sanitation, waste management, HACCP for food processors, food legislation and food labeling.

Prerequisite(s): DFN*1190 and consent of the instructor
Location(s): Alfred, Kemptville

DFN*4110 Product Development and Marketing W (2-5) [0.50]

The students will have an opportunity to develop a product/recipe. Procedures for quality assurance in food production, including evaluating products against quality standards, performing field studies, conducting taste panel testing and implementing client feedback will be followed. Demonstration and presentation techniques will be utilized in marketing the product.

Prerequisite(s): DFN*1020, DFN*2020, DFN*2130 or consent of the instructor
Location(s): Alfred, Kemptville

DFN*4160 Food Biotechnology F,W (4-0) [0.50]

This course explores the developing field of biotechnology beginning with its origins and the use of genetic engineering techniques. Many of the applications of biotechnology will be discussed with emphasis placed on food biotechnology applications. Ethical, public, nutritional and safety issues will also be addressed.

Prerequisite(s): second year course or consent of the instructor
Location(s): Alfred, Kemptville

DFN*4170 Food Hazard Analysis F,W (4-0) [0.50]

This course provides students with an overview of Risk Analysis and its role in food hazards. Understanding the food supply chain and the steps involved in food recall will be introduced. The analysis, recognition and management of food hazards and risk will be discussed using case studies.

Prerequisite(s): second year course or consent of the instructor
Location(s): Alfred, Kemptville

DFN*4200 Management Case Study W (4-0) [0.50]

Organizational structure in health care facilities will be addressed as well as standards of care, Quality Assurance programs, policies and procedures. Through case studies, students will learn how to solve various situations in food service operation.

Prerequisite(s): DFN*3030, (one of DFN*3200, DAGR*4600)
Location(s): Alfred, Kemptville

DFN*4210 Nutrition Myths and Facts F,W (4-0) [0.50]

This course provides exposure to current issues in nutrition including: nutrition for fitness and sport, eating disorders, dietary supplements, herbal remedies and future foods. Many controversies in nutrition will be discussed throughout the course with regards to nutrition quackery, magic bullets and weight loss strategies. Students will further expand their knowledge and skills in the field of nutrition and develop critical thinking skills as they investigate the many myths and facts in nutrition. Students will be expected to develop and participate in various nutrition presentations and projects.

Prerequisite(s): 1 of DFN*1060, DFN*2020, consent of the instructor
Location(s): Alfred, Kemptville

Horticulture

DHRT*1000 Landscape Management F (2-3) [0.50]

The use of hand tools, power machinery, and traditional and contemporary methods in the on-going maintenance of landscape installations will be presented, along with proper equipment operation and safety.

Location(s): Kemptville, Ridgetown

DHRT*1050 Plant Identification I F (2-3) [0.50]

This course provides an introduction to the identification of common landscape plants. Students will learn to identify plants by sight through recognition of subtle differences. Botanical names will be taught. Growing requirements, physical features, ornamental characteristics and potential landscape uses will be discussed.

Location(s): Alfred, Kemptville, Ridgetown

DHRT*2000 Greenhouse Management F,W (3-2) [0.50]

Students will learn the basics of greenhouse design and use. Topics such as structures, ventilation, heating, supplemental lighting, relative humidity, irrigation, fertility management and CO2 enrichment will be included. Management and cultural principles of commercial production of various horticultural crops in greenhouses will be used to illustrate management strategies.

Prerequisite(s): DAGR*1200
Location(s): Alfred (Offered even-numbered years only), Kemptville, Ridgetown

DHRT*2100 Landscape Design I W (2-4) [0.50]

Students will study the principles of landscape design and learn how to integrate different design styles, different types of landscape materials, structures and plants to create an attractive residential living environment. Students will learn how to identify the design requirements of a site, choose appropriate plants or structures, arrange landscape components and draw a plan of the proposed layout. Introductory drafting techniques will be practised.

Prerequisite(s): DHRT*1050
Location(s): Kemptville, Ridgetown

DHRT*2200 Plant Propagation W (2-2) [0.50]

This course covers the principles and practices of propagation for horticultural plants. Sexual (seed) propagation to include seed maturation, dormancy and seed germination; vegetative (asexual) propagation, including division, layering, budding, grafting and tissue culture are also discussed.

Prerequisite(s): DAGR*1200
Location(s): Alfred (Offered odd-numbered years only), Kemptville, Ridgetown

DHRT*3010 Fruit and Vegetable Production F,W (4-0) [0.50]

Students in this course will develop a general understanding of fruit and vegetable production.

Location(s): Alfred (Offered even-numbered years only), Ridgetown

DHRT*3050 Plant Identification II F (2-3) [0.50]

This is an advanced course continuing the identification of landscape plants. Growing requirements, physical approximate size at maturity and ornamental characteristics will be discussed for each plant. Less common taxa and additional cultivars will be highlighted.

Prerequisite(s): DHRT*1050
Location(s): Kemptville, Ridgetown

DHRT*3090 Landscape Construction F,W (3-2) [0.50]

Construction methods and practices for a variety of landscape projects will be described, demonstrated or practised. Use of the level and project layout will be demonstrated.

Prerequisite(s): DHRT*1000, DHRT*1050, DHRT*2100
Location(s): Kemptville, Ridgetown

DHRT*3100 Landscape Design II F,W (2-4) [0.50]

Students will learn how to read landscape plans and blueprints, and interpret them for layout, costing, estimating, and installation. Landscape planning for parks, golf courses, commercial, institutional and industrial sites will be examined.

Prerequisite(s): DHRT*2100
Location(s): Kemptville, Ridgetown

DHRT*3150 Nursery Management F (2-3) [0.50]

The course covers the setup and organization of a horticultural nursery and the methods of production for field and container-grown landscape nursery stock including cultural management and merchandising in wholesale and retail operations.

Prerequisite(s): DHRT*2200
Location(s): Alfred, Kemptville, Ridgetown

DHRT*3160 Turf Management F,W (3-2) [0.50]

This course is a study of the identification, production and management of turfgrass as it relates to use, quality and environmental stewardship

Prerequisite(s): DAGR*1200
Location(s): Kemptville, Ridgetown

DHRT*3170 Horticultural Weed Science F (3-0) [0.50]

Identification of common weeds in horticulture, methods of weed control, herbicide mode of action and basis of selectivity are the primary areas included in this course.

Location(s): Kemptville, Ridgetown

DHRT*3300 Greenhouse Crop Production F,W (3-2) [0.50]

Production practices of selected greenhouse vegetable crops, pot crops and cut flower crops will be demonstrated.

Prerequisite(s): DHRT*2000, DHRT*2200
Location(s): Alfred (Offered odd-numbered years only), Kemptville, Ridgetown

DHRT*3510 Experiential Learning in Horticulture S,F,W [0.50]

Student-initiated learning opportunities can be developed as a credit course in consultation with a supervising faculty member. Details of the activities included in the program will be outlined in a learning contract initiated by the student and agreed to by the faculty supervisor prior to the commencement of the work experience.

Prerequisite(s): 4.00 credits, registration in the Diploma Program in Horticulture
Restriction(s): DAGR*3510, DAGR*3880 , DFN*3510
Location(s): Kemptville, Ridgetown

DHRT*3910 Special Study Project S,F,W (0-0) [0.50]

A self-directed student project focusing on a topic of academic and/or practical interest to the student. The student will identify and propose a detailed course outline to be reviewed and approved by the faculty supervisor prior to the commencement of the project. The project could include a research assigment, a literature review, a hands-on assignment with specific learning objectives and milestones for achieving these objectives.

Prerequisite(s): 3.00 credits, registration in the Horticulture Diploma program and written permission of the faculty supervisor
Restriction(s): DAGR*3900, DAGR*3910 , DFN*3910
Location(s): Kemptville, Ridgetown

DHRT*4000 Ornamental Plant Protection W (3-2) [0.50]

This course is a study of the biology and control of insects and diseases of nursery, landscape, turfgrass and greenhouse crops. Approaches to integrated pest management are incorporated into control methods.

Location(s): Kemptville, Ridgetown

DHRT*4010 Floral Design and Retailing W (0-4) [0.50]

The basic requirements of a floral designer will be studied, including the principles and elements of design, colour theory, design styles and techniques, in-shop procedures and sales skills. There will be opportunity to practise arranging both fresh and permanent flowers. Proper care, handling and display of fresh-cut flowers as well as foliage and flowering plants are also included in this course.

Location(s): Kemptville, Ridgetown

DHRT*4050 Certification and Safety W (3-2) [0.50]

Students will learn the necessary information required to write the Pesticide Applicator's examinations which are a legal requirement for anyone wishing to apply or sell pesticide products in Ontario. For interested students, licensing exams can be arranged with licensing authorities upon payment of relevant fees. Students will also be introduced to Federal and Provincial legislation governing worker health and safety in the workplace. The Occupational Health and Safety Act, in particular WHMIS, CPR and First Aid will be covered.

Prerequisite(s): DAGR*1600
Location(s): Kemptville, Ridgetown

DHRT*4100 Computer Assisted Design F,W (2-4) [0.50]

Landscape designs and visualizations will be prepared with computer technology, using residential landscape projects. Drafting, design, visualization or modelling software will be taught and used to create plans, views, pictures and/or models.

Prerequisite(s): DAGR*1200, DAGR*1610 OR CIS*1000, DHRT*1050, DHRT*2100
Location(s): Kemptville, Ridgetown

DHRT*4300 Arboriculture W (2-3) [0.50]

This course will provide students with the opportunities to learn both the principles and the skills necessary to manage and care for trees in the landscape. Case studies will be used to help students develop the skills necessary to assess tree problems.

Location(s): Kemptville, Ridgetown

Turfgrass Management

DTM*1000 The Turf Industry F (1-4) [0.50]

An introduction to the many disciplines within the turfgrass industry including economic and social importance as well as interactions among the industry sectors and society.

Location(s): Guelph

DTM*1100 Plant Biology F (3-2) [0.50]

This course covers the structure, function, growth, development and reproduction of turfgrass and landscape plants as they relate to management in the urban environment.

Restriction(s): Enrolment in Diploma in Turfgrass Management.
Location(s): Guelph

DTM*1200 Turf Equipment F (2-3) [0.50]

A course dealing with aspects of gasoline, diesel, mechanical, electrical and hydraulic power used for turf construction and maintenance machinery, emphasizing selection, maintenance, operation, safety and training related to machinery.

Location(s): Guelph

DTM*1300 Turf Soil Principles F (3-2) [0.50]

A study of the basic concepts of all aspects of naturally occurring and constructed soils including physical, chemical, biological and hydrologic properties and their relationship to the use and management of soil materials for turfgrass and landscape plant growth.

Location(s): Guelph

DTM*1400 Landscape Plants F (2-3) [0.50]

A study of the recognition, identification, naming, physical features and cultural adaptation of both native and introduced woody and herbaceous plants useful in cultivated landscapes.

Co-requisite(s): DTM*1100
Location(s): Guelph

DTM*1500 Communication Skills F (2-3) [0.50]

This course provides the basis for developing good oral and written communication skills. Practical examples will enable students to talk and write through the simulation of real life situations in turfgrass management.

Co-requisite(s): DTM*1000, DTM*1300
Location(s): Guelph

DTM*2000 Turf Management I W (2-3) [0.50]

Using turfgrass for home lawns, industrial sites, roadsides, athletic fields, municipal sites, golf courses and reclamation of land; including the basic characteristics and primary cultural management practices of turfgrasses.

Prerequisite(s): DTM*1100, DTM*1300
Location(s): Guelph

DTM*2100 Turf Irrigation and Drainage W (2-3) [0.50]

An understanding of water management in turfgrass systems including the principles of drainage and irrigation as well as the design, installation and maintenance of drainage and irrigation systems. The responsible use of water in turf maintenance will be emphasized.

Prerequisite(s): DTM*1300
Location(s): Guelph

DTM*2200 Computers and Math for Turf W (2-3) [0.50]

An introduction to the use of the computer operating systems and software in turfgrass management applications. This course will also augment mathematics skills necessary to solve actual problems for turfgrass management operations.

Prerequisite(s): DTM*1000
Location(s): Guelph

DTM*2300 Business and Finance for Turf W [0.50]

A study of the basic aspects of business management as it applies to turf-related enterprises.

Prerequisite(s): DTM*1000
Location(s): Guelph

DTM*2400 Landscape Design W (1-4) [0.50]

A study of the principles of landscape design and how to integrate different design styles, landscape materials, structures and plant material to create attractive and functional outdoor environments.

Prerequisite(s): DTM*1400
Location(s): Guelph

DTM*2500 Arboriculture W (2-3) [0.50]

A course about the culture and maintenance of trees in turfgrass related urban landscapes, providing students with both the principles and practices of tree care. Case studies will help students develop the skills necessary to diagnose tree problems.

Prerequisite(s): DTM*1100, DTM*1400
Location(s): Guelph

DTM*3000 Turf Management II F (2-3) [0.50]

An intermediate level course dealing with topics in managing turfgrasses for high maintenance uses such as golf courses and sports fields, with particular emphasis on rootzone problems.

Prerequisite(s): DTM*2000, DTM*2100
Location(s): Guelph

DTM*3100 Current Turf Practices F (1-4) [0.50]

This course enables students to develop the reflective aspects of their required summer work semester as well as to study topics of current interest in turfrass management. Students will prepare a major written report, present seminars and prepare presentations on selected topics.

Prerequisite(s): DTM*1000, DTM*2000 plus 4.00 credits
Location(s): Guelph

DTM*3200 Turf Diseases F (2-3) [0.50]

The biology and management of turfgrass diseases, emphasizing ecology of turfrass diseases and cultural methods of management, as well as field recognition and diagnosis. Advances in biological and chemical control measures and their impact on turfgrass ecosystems and surrounding environments will be discussed.

Prerequisite(s): DTM*1100
Location(s): Guelph

DTM*3300 Turf Insects and Weeds F (2-3) [0.50]

The biology and management of turfgrass insects and weeds, emphasizing the ecology and cultural methods of management as well as field recognition and diagnosis. Advances in biological and chemical control measures and their impact on turfgrass ecosystems and surrounding environments will also be discussed.

Prerequisite(s): DTM*1100
Location(s): Guelph

DTM*3400 Landscape Construction F (1-4) [0.50]

A study of the physical properties and uses of landscape construction materials plus the implications of materials and construction techniques as related to the design of landscape projects applicable to the golf course setting.

Location(s): Guelph

DTM*3800 Special Study Project I S,F,W (0-0) [0.50]

A self-directed student project focussing on a topic of academic and/or practical interest to the student. The student will identify and propose a detailed course outline to be reviewed and approved by the faculty supervisor prior to the commencement of the project. The project could include a research assignment, a literature review, and/or a hands-on assignment with specific learning objectives and milestones for achieving these objectives.

Prerequisite(s): 4.00 credits
Equate(s): DHRT*3910
Restriction(s): Enrolment in Diploma in Turfgrass Management.
Location(s): Guelph

DTM*4000 Turf Management III W (2-3) [0.50]

An advanced course dealing with topics of managing turfgrasses for high maintenance uses such as golf courses and sports fields, with particular emphasis on abiotic and biotic stresses.

Prerequisite(s): DTM*3000, DTM*3200, DTM*3300
Location(s): Guelph

DTM*4100 Turf Environmental Management S,F,W (3-2) [0.50]

An overview of the many environmental issues facing professional turfgrass managers, including regulatory issues, waste management, environmental protection and monitoring, and managing the non-turf elements of the landscape.

Prerequisite(s): DTM*3000
Location(s): Guelph

DTM*4200 Golf Course Design and Construction W (1-4) [0.50]

This course is an introduction to both golf course design and construction techniques, emphasizing aesthetics while retaining sense of challenge to the player and adhering to requirements of regulatory bodies.

Prerequisite(s): DTM*2400, DTM*3400
Location(s): Guelph

DTM*4300 Turf Case Studies W (2-3) [0.50]

Case studies and discussion considering integrated management of selected turfgrass sites emphasizing problem analysis, principle application, and decision making.

Prerequisite(s): DTM*3000, DTM*3200, DTM*3300
Co-requisite(s): DTM*4000
Location(s): Guelph

DTM*4400 Human Resources Management W (3-2) [0.50]

This course exposes students to the basic principles of human resource management, such as personnel planning and regulations, recruiting and hiring, supervisory skills and problem solving.

Prerequisite(s): DTM*1500
Location(s): Guelph

DTM*4600 Computer Assisted Design W (1-4) [0.50]

Landscape designs and visualizations will be prepared with computer technology using landscape and turfgrass related projects. Drafting, design, visualization or modeling software will be taught and used to create plans, views, pictures and/or models.

Prerequisite(s): DTM*1400, DTM*2200, DTM*2400
Equate(s): DTM*4100
Restriction(s): Enrolment in Diploma in Turfgrass Management.
Location(s): Guelph

DTM*4800 Special Study Project II W (0-0) [0.50]

A self-directed student project focusing on a topic of academic and/or practical interest to the students. The student will identify and propose a detailed course outline to be reviewed and approved by the faculty supervisor prior to the commencement of the project. The project could include a research assignment, a literature review, and/or a hands-on-assignment with specific learning objectives and milestones for achieving these objectives.

Prerequisite(s): DTM*3800
Equate(s): DHRT*3910
Restriction(s): Enrolment in Diploma in Turfgrass Management.
Location(s): Guelph

Veterinary Technology

DVT*1000 Livestock Production and Management F (6-0) [0.50]

This course introduces the students to food animals and horses, with an emphasis on terminology, nutrition, behaviour and housing. The food animal portion also includes common breeds, marketing, and breeding practices of various species, including sheep, poultry, dairy cattle, beef cattle and swine. By visiting the swine, beef, and dairy herds on campus, the students are able to observe the behaviour and management of various species. The equine portion of the course emphasizes the techniques, terminology and common diseases that the veterinary technician working in an equine practice would be exposed to, through the use of lectures, slides, videos and handouts. The colony horses provide hands-on experience in behaviour, handling, and restraint, as well as stable management.

Location(s): Ridgetown

DVT*1010 Anatomy and Physiology I S,F (2-2) [0.50]

This course encompasses the gross anatomy and physiology of domestic animals with special emphasis on the cat as a pet animal species. The course covers all major body systems, with emphasis on those of veterinary clinical significance.

Location(s): Ridgetown

DVT*1030 Biochemistry and Genetics F (4-0) [0.50]

This course is an introduction to the fundamental concepts of biochemistry and animal metabolism. The basics of biochemistry are taught with an emphasis on interrelating physiological, chemical, nutritional and pharmacological processes of animals. Topics include organic chemistry, basic chemistry of biological compounds and metabolism. Genetics provides a basic understanding of the principles of protein synthesis, DNA replication, heritability, selective breeding and genetic improvement, genetic engineering and vaccine production.

Location(s): Ridgetown

DVT*1040 Medical Exercises S,F (1-4) [0.50]

This is a practical introductory course with an emphasis on working with dogs, cats, laboratory animals, birds, horses, cattle, sheep and pigs. Animal care and bathing are assigned to students on a rotating basis. Basic restraint, examination, medication and bandaging are discussed and practised. Injection and venipuncture techniques are introduced.

Location(s): Ridgetown

DVT*1070 Laboratory Techniques S,F (4-4) [0.50]

This first semester course consists of modules in microbiology and haematology. The microbiology module is an introduction to theoretical and practical aspects of microbiology. Topics include the study of microorganisms with emphasis on their morphology, physiology, biochemistry, culture and identification. The operation of the light microscope and laboratory safety are discussed. The haematology portion will introduce the veterinary technology student to the basic theoretical and practical aspects of canine and feline blood. Practical sampling techniques, handling and processing of samples, and cell identification will be covered. The performance, assessment and evaluation of common veterinary clinical procedures will be emphasized. Haematology mathematical calculations will also be covered.

Restriction(s): DVT*1020 ,
Location(s): Ridgetown

DVT*1080 Laboratory Quality Assurance S,F (3-4) [0.50]

This course introduces students to quality control and the mathematical calculations required in a laboratory environment. The quality control module is an introduction to basic clinical chemistry principles, common laboratory equipment safety, quality controls, mathematical calculations, and proper analytical techniques. The mathematical module introduces the veterinary technology student to the basic mathematical concepts and skills necessary to efficiently function in a clinical laboratory environment. Basic mathematical manipulations and calculations performed without the use of calculators are encouraged. Various mathematical calculations required to perform laboratory measurements are discussed and practiced.

Prerequisite(s): DVT*1050 ,
Location(s): Ridgetown

DVT*2000 Companion Animal Management W (5-0) [0.50]

This course offers the veterinary technician student the information required to understand small animal husbandry. Through lectures, practical information is gained into the companion animal's nutritional needs, behaviour patterns and preventative health care. They learn what is normal and abnormal behaviour and how to advise clients on applying proper training techniques. The emphasis in this course is the prevention of health problems in companion animals.

Location(s): Ridgetown

DVT*2010 Anatomy and Physiology S,F,W (4-2) [0.50]

A continuation of DVT*1010, the course covers the structure and functions of select major body systems with emphasis on the lymphatic system and its importance in preventing and/or overcoming disease. Disease transmission, development and serological diagnosis will be discussed.

Prerequisite(s): DVT*1010
Location(s): Ridgetown

DVT*2020 Haematology S,W (3-4) [0.50]

This course expands upon the information introduced in DVT*1070. The veterinary technology student will study basic theoretical and practical aspects of feline, equine and bovine blood. Blood cell precursors will be studied and corrected counts will be included. Alterations of RBCs and WBCs will be covered. The performance, assessment and evaluation of common veterinary clinical procedures are emphasized. Haematological mathematical calculations will also be covered, as well as a section on cytology

Prerequisite(s): DVT*1070
Location(s): Ridgetown

DVT*2030 Communications S,W (2-2) [0.50]

Issues with communication between the veterinary technician and clients, co-workers and employers are explored, using communication theory and skills. Role playing and application of theory are stressed. Students are introduced to computers through lecture/lab format to perform basic DOS commands, word processing and clinical application of veterinary software, enabling them to operate IBM-compatible computers in a network environment as well as computers in a clinic.

Location(s): Ridgetown

DVT*2040 Medical Exercises S,W (2-4) [0.50]

This is a practical introduction to venipuncture, IV catherization, anaesthesia and aseptic surgical techniques, restraint in laboratory animals and birds and the performance of fluid therapy and drug dose calculations.

Prerequisite(s): DVT*1040
Location(s): Ridgetown

DVT*2050 Urinalysis S,W (1-4) [0.50]

This is a theoretical and practical course which emphasizes the macroscopic, chemical and microscopic characteristics of urine, along with the concepts of urinary diagnostic testing. The prevention and dietary treatment of urolithiasis is explored.

Location(s): Ridgetown

DVT*3000 Laboratory Animal Science S,F (4-0) [0.50]

This course familiarizes the students with scientific research involving animals, as well as issues in veterinary ethics. Topics include the role of the veterinary technician in research, regulations governing the use of animals in research, basic steps required to conduct a research project, how various animal species are used in research, assessment of animal health and welfare during a research procedure, and the care and common diseases of research animals. Through the preparation and presentation of seminars, students are encouraged to examine various aspects of veterinary ethics.

Location(s): Ridgetown

DVT*3010 Animal Nursing I S,F,W (2-4) [0.50]

This course is concerned with practical animal nursing relative to the basic needs of the animal. Students learn about general patient management, including the importance of history taking, medical records, the physical exam, patient handling, fluid therapy and hospital care. Common diseases and conditions are also discussed. Students are required to care for healthy large and small animals, maintain a hospital area, and assign animal use in the teaching program. Students also visit small, large, equine and referral practices to observe and participate in the practical aspects of veterinary technology.

Location(s): Ridgetown

DVT*3020 Diagnostic Techniques I S,F (3-4) [0.50]

This course emphasizes practical laboratory techniques utilized routinely in veterinary practice. The course consists of modules in clinical chemistry and parasitology covering parasitology, haematology, cytology and chemistry. The parasitology portion of the course familiarizes the student with the host-parasite relationship for the common parasites of veterinary significance in Canada. Topics of discussion for the various parasites will include: campuslocation in the host, methods of infection, development and behaviour, clinical signs of disease, diagnoses and potential human health hazards. Various laboratory tests used in the diagnosis of animal parasites are studied/performed in the laboratory periods.

Location(s): Ridgetown

DVT*3030 Radiography I S,F (3-4) [0.50]

This is a lecture and laboratory course dealing with practical and theoretical aspects of radiography in animals. The lecture portion of this course outlines radiation safety, positioning, radiographic equipment, production of radiation, intensifying screens, films, grids, processing, contrast medias, preparing technique charts and trouble shooting. Each laboratory session is preceded by a prelab lecture which will introduce the laboratory topic and walk through case scenarios to cover any problems that may be incurred. During the laboratory sessions, the students work in small groups learning proper positioning, processing both manually and automatically, two contrast studies and various special imaging techniques.

Location(s): Ridgetown

DVT*3040 Pharmacology F (3-0) [0.50]

This course comprises a study of pharmacological terminology; basic mechanisms of absorption, distribution, metabolism, excretion and actions of drugs; legal aspects of pharmacology; and a discussion of drug classes commonly used in veterinary medicine. Drug dose calculation skills learned in DVT*2040, are also reviewed.

Location(s): Ridgetown

DVT*3050 Surgical and Anaesthetic Principles I S,F,W (3-4) [0.50]

This course deals with the practical and theoretical aspects of anaesthetic and surgical techniques in animals. The lecture portion of the course introduces the students to various anaesthetic agents and techniques, as well as the principles of asepsis, the importance of monitoring and the correct response to anaesthetic emergencies. Each laboratory session is also preceded by a lecture in which the students learn about the rationale behind and possible complications with each surgery, thus enabling them to be involved in client education. During the laboratory sessions, the students work in small groups, rotating within these groups, becoming proficient in anaesthesia, surgical assistance, instrumental handling, surgical nursing and post-operative care.

Location(s): Ridgetown

DVT*4000 Dentistry S,W (1-4) [0.50]

This course introduces the fundamentals of small animal oral health, including the anatomy and physiology of the tooth and surrounding structures, and the disease processes which can occur. The emphasis is on the prevention of oral disease. Through the use of models and live patients, the student is introduced to the proper techniques involved in performing a complete dental prophylaxis and is given the information needed to enable them to counsel clients on appropriate preventative home care.

Location(s): Ridgetown

DVT*4010 Animal Nursing II S,W (3-4) [0.50]

A continuation of DVT*3010, concerned with practical animal nursing relative to basic needs of the animal. Students learn about general patient management, including the importance of history-making, medical records, the physical exam, patient handling, fluid therapy and hospital care. Common diseases and conditions are also discussed. Students are required to care for healthy large and small animals, maintain a hospital area and assign animal use in the teaching program. Students also visit small, large, equine and referral practices to observe and participate in the practical aspects of veterinary technology.

Prerequisite(s): DVT*3010
Location(s): Ridgetown

DVT*4020 Diagnostic Techniques II S,W (1-4) [0.50]

This course emphasizes practical laboratory techniques routinely in veterinary practice. The material acquired in the introductory courses in laboratory techniques is expanded upon, particularly in the areas of bacteriology, haematology, cytology and mycology. Both large and small animal samples are utilized in order to prepare students to work in small, large or mixed animal practices.

Prerequisite(s): DVT*3020
Location(s): Ridgetown

DVT*4030 Radiography II S,W (1-4) [0.50]

This course is a lecture and laboratory course dealing with practical application of all aspects of radiography in animals (a continuation of DVT*3030). Emphasis of this course is on proper positioning, using mechanical restraint, in order to obtain a quality radiograph. Subject material covered in the lecture course is applied here. In addition to routine radiography, topics include: trouble shooting, use of contrast media, safelight testing, dental radiography methods, maintenance of processing equipment and development of a radiographic technique chart.

Prerequisite(s): DVT*3030
Location(s): Ridgetown

DVT*4040 Hospital Management S,F,W (5-0) [0.50]

This course is designed to familiarize students with the basic skills and procedures used in the management of animal hospitals, with emphasis on small animal facilities. Topics included within this course are personnel management, client relations, marketing strategies, inventory control, public health issues, and financial management.

Location(s): Ridgetown

DVT*4050 Surgical and Anaesthetic Principles S,W (1-4) [0.50]

This lecture and laboratory course builds on the skills and knowledge acquired during DVT*3050. The lecture portion gives background information on the anatomy, patient complications for each surgery, as well as the requirements for client education. Supplementary surgical lectures provide information about other small and large animal surgeries commonly performed in clinical practice.

Prerequisite(s): DVT*3050
Location(s): Ridgetown

DVT*4060 Externship W. [Pass/Fail] W [0.00]

The Externship is a four week, 160 hour training and evaluation period in which senior students in their last semester enter veterinary practices away from Ridgetown College. The campuslocation must be one in which they have not worked or volunteered previously. Students are required to perform many of the duties that are commonly performed by graduate technicians, and are assessed by veterinarians or graduate technicians in the work setting. Students are required to keep a journal, as well as a check list of the skills they are performing. At the completion of their externship, they will complete a report on their practice campuslocation. They will also be assessed by the practice. If the externship is not completed satisfactorily, it will have to be successfully repeated before the student can graduate. **(Offered annually at the end of the 4th semester for Conventional Delivery Vet. Tech program and at the end of the 3rd summer semster for the Alternative Delivery program.)**

Prerequisite(s): All current Veterinary Technology Courses
Co-requisite(s): All current Veterinary Technology Courses
Restriction(s): Only offered to students in the Conventional and Alternative delivery Veterinary Technology programs offered at Ridgetown College, University of Guelph
Location(s): Ridgetown