

New EDT Course Curriculum

For student new to the program in the fall of 2019.

The 1st year (level 1) courses remain the same with added hours, but the 4th semester will no longer be split into 3 streams and instead have common courses split between 2 sections like all other semesters.

Starting winter of 2021, Term 1222 (4th Semester Courses)

DSGN2451 - Additive and Advanced Manufacturing Design

This course applies the principles, standards and codes from the pre-requisites to a higher level by incorporating the principles and approaches of machine design from machine concept to the three dimensional computer model of the machine. This course also includes the study of robotics and CNC programming. The students will be able to; describe the structural and functional characteristics of various types of automated systems, identify Industrial robot terminology and classification, define end of the arm tooling, mechanical components within the robotic systems and automated support systems, record positions, design and write robot programs for material handling, assembly and welding applications, prepare programs, set up and operate computer numerically controlled mill.

DSGN2452 - Infrastructure Design

This project-based course applies sustainable infrastructure design concepts and utilizes Civil 3D software to design and produce industry standard drawings. An in-depth look at the resources required by industry professionals is outlined. Students will research a survey project from its inception to final design utilizing the Land Titles Office and provincial databases. Various water management systems such as earthen dams and open channel design are discussed and designed to complete this project based course.

DSGN2453 - Process Plant Design

This course uses industry accepted design principles to layout various types of equipment and piping for an area of a process plant. The student will identify common instruments and create required instrument drawings for process control systems. The student will review the design, make improvements and create a 3D model to use for production of drawings. The current 3D software used is Bentley Plant Design for equipment and piping, and AutoCAD for other drawings. Students will also be expected to contribute to a project team for a design review project.

EDDT2450 - Reinforced Concrete Design

This course requires the student to apply the concepts of mechanics and structural design theory to reinforced concrete structures such as beams, columns, foundations, structural slabs and retaining walls. The student will prepare calculations and engineering drawings to satisfy the latest edition of the relevant code as required by design.

EDDT2462 - Technical Report

This course will incorporate and apply the technical writing skills acquired in COMM1163 (Engineering Communications). A substantial portion of the course will focus on the production of a technical report. The technical report will apply all the knowledge the student has obtained through the previous semesters.

PMGT2463 - Project Management for the Technologist

This course discusses the basic elements of project management. The engineering designer's role within a project's process will be studied in detail. The coordination of people, equipment, materials, money and schedules to complete a project will be discussed. The use of project management software will be a significant component of the course.