



COURSE OUTLINE

Course Name: Civil Utility Services

Course Number: DRFT 1331

Number of Credits: 2.0

Effective Date: September 2019

Course Description:

Building on the Advanced Road Design course, students will expand their knowledge and skill of pipe networks by creating drawings for a subdivision storm and sanitary system. Additionally, students will model profiles and cross sections applicable to municipal and industry design standards.

School or Centre:

School of Trades, Technology & Design

Year of Study:

1st Year Post-secondary

Course History:

New Course

Name of Replacing Course (if applicable):

Course Pre-requisites (if applicable):

DRFT 1280 Industrial Site Layout, DRFT 1281 Autodesk Civil 3D and DRFT 1282 Road Alignment Detailing

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No Yes (details below):

Instructional Strategies:

Lectures, handout materials, video presentation, on-line activities, and project/problem based learning activities are used.

Course Learning Outcomes:

1. Create Data Shortcuts
2. Publish Data Shortcuts File
3. Create pipe Networks for Storm & Sanitary
4. Generate Plan & Profile Drawing Production Sheets for Road Design and Underground Utilities
5. Produce Combined Cross Sections (Original ground, Design Ground, Utilities)
6. Generate Design Reports for all aspects of the Design, Alignments, Profiles, Surface Model and Utilities
7. Generate drawing exchange files to be shared with other software

Program Learning Outcomes:

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Use drawing techniques to complete projects in orthographic projection, sectioning, and dimensioning, auxiliary view and machine detailing.
- Describe concepts in orthographic projection, sectioning, and dimensioning, auxiliary view and machine detailing.
- Employ Computer Aided Drafting (CAD) and three dimensional modelling systems skills to produce drawings from data, designs and/or specifications.
- Demonstrate an understanding of drafting and 3D modeling skills and conventions.
- Develop drafting, 3D Building Information Modeling (BIM) and related trade skills and knowledge.
- Utilize critical thinking, team building and interpersonal communication skills.
- Apply concepts of civil technology and planning to produce drawings and three dimensional models for the development of a civil site.
- Use structural engineering theories and BIM practices to prepare engineering drawings for three dimensional models of structures, which incorporate reinforced concrete and structural steel.
- Prepare a comprehensive professional portfolio.
- Prepare a résumé and letters of application and perform other related job search skills.

Evaluation/Grading System

Grading System	Specify if 'Other':	Specify Passing Grade:
Letter Grades		C-

Components and Weighting of the Assessment/Evaluation Plan:

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Assignments	10	
Quizzes/Tests	15	Practical and written quizzes
Exam	25	Practical exam
Project	50	Minimum of 3 project-based assignments of approximately equal value (20%, 15% and 15%)
	Total	100

Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
J - Classroom/Online (Mixed Mode)	20	
B - Lab (Computer, Chemistry...)	40	
	Total	60

Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

Course Topics:

Creating Data Shortcuts Project folder
Publishing Data Shortcuts
Designing a Storm Sewer Network
Creating Pipe Network
Drawing and Editing Pipe Networks
Labeling Pipes
Cross sections Sheet Production
Project Object to Section View
Reports Manager

VCC Education and Education Support Policies

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

<http://www.vcc.ca/about/governance--policies/policies/>

To find out how this course transfers, visit the BC Transfer Guide at www.bctransferguide.ca.

FOR COMMITTEE USE ONLY

Approved by Curriculum Committee:	September 18, 2018	Approved by Education Council:	October 9, 2018
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