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## DRFT 1362: BIM Basic for Mechanical

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### EFFECTIVE DATE

September 2021

### DEPARTMENT

Drafting

### DESCRIPTION

This course introduces the student to the software's user interface and the basic HVAC, electrical, and piping/plumbing components that make BIM software a powerful and flexible engineering modeling tool.

### CREDITS

2.0

### YEAR OF STUDY

1st Year Post-secondary

### PREREQUISITES

DRFT 1256 Plumbing Systems for Buildings DRFT 1257 Electrical Systems for Buildings DRFT 1258 Utility Data and Setting-Up Projects DRFT 1259 HVAC Systems for Buildings DRFT 1260 Fire Suppression and Sprinkler Systems for Buildings DRFT 1261 Process Flow Diagrams and Tank/Pump Box Fabrication DRFT 1262 Pipe Components: Pipe, Fittings, Valves, Supports and Pumps DRFT 1263 Piping and Instrumentation Diagrams & Specifications DRFT 1264 Plant and Equipment Layout DRFT 1265 Process and Utility Piping Layout DRFT 1266 Piping Fabrication Isometrics

### COREQUISITES

None

### COURSE LEARNING OUTCOMES

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

- Create 3D parametric models of Mechanical, Electrical, and Plumbing (MEP) systems using BIM software
- Describe the basics of HVAC, electrical, and piping/plumbing
- Create construction documents, create schedules and add details
- Explain the basics of a complete MEP project
- Prepare drawing layouts for small projects and executing redlines from designers for large projects
- Apply system requirements

## PRIOR LEARNING ASSESSMENT & RECOGNITION (PLAR)

None

## HOURS

Lecture: 20

Lab: 40

## INSTRUCTIONAL STRATEGIES

Lectures, video presentations, project-/problem-based learning, lab activities. The course may be offered face-to-face or in a blended format (mix of face-to-face and online)

## GRADING SYSTEM

Letter Grade (A-F)

## PASSING GRADE

D

## EVALUATION PLAN

Type	Percentage	Assessment activity
Project	60	Minimum of 3 project-based major assignments of approximately equal value.
Quizzes/Tests	10	
Final Exam	30	

## COURSE TOPICS

- Inserting and connecting MEP components and using the System Browser
- Creating HVAC networks with air terminals, mechanical equipment, ducts, and pipes
- Creating electrical circuits with electrical equipment, devices, and lighting fixtures and adding cable trays and conduits

- Creating HVAC and plumbing systems with automatic duct and piping layouts
- Creating and annotating construction documents
  
- Adding tags and creating schedules

## LEARNING RESOURCES

None

Notes:

- Course contents and descriptions, offerings and schedules are subject to change without notice.
- Students are required to follow all College policies including ones that govern their educational experience at VCC. Policies are available on the VCC website at:  
<https://www.vcc.ca/about/governance--policies/policies/>.
- To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

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