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# DRFT 2261: Diploma Process Flow Diagrams and Tank/Pump Box Fabrication

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## EFFECTIVE DATE

September 2021

## DEPARTMENT

Drafting

## DESCRIPTION

Students learn about process flow diagrams, tank design, and general arrangements, and how they are used in industrial design.

## CREDITS

2.0

## YEAR OF STUDY

2nd Year Post-secondary

## PREREQUISITES

DRFT 2100 Integrated BIM Project

## COREQUISITES

None

## COURSE LEARNING OUTCOMES

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

- Describe process flow diagrams and how they are used in the plant design process.
- Analyze the mass balance contained in the process flow diagram and determine its correctness.
- Create a process flow diagram using standard industry design symbology.
- Discuss the design parameters needed to be considered when designing a tank or pump box.
- Identify the different components contained in a tank or pump box.
- Calculate the volume of tanks and pump boxes based on given engineering data.
- Draw a typical tank layout using standard engineering drawing conventions.
- Apply the concepts and processes at a higher level, in a 3D Building Information Modeling setting.

## 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

- Terminology, abbreviations, & symbols within the flow diagram and pump box specialties
- Process Flow Diagram Fundamentals
- Project Mass Balance
- Interpretation of Flow Values
- Equipment Numbers
- Tank Construction and Volume
- Tank Drawing Fundamentals

## 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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### Broadway campus

1155 East Broadway  
Vancouver, B.C. Canada  
V5T 4V5

### Downtown campus

250 West Pender Street  
Vancouver, B.C. Canada  
V6B 1S9

### Annacis Island campus

1608 Cliveden Avenue  
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