



Western Technical College

## 31410319 Blueprint Reading 1 - Building Trades

### Course Outcome Summary

#### Course Information

<b>Description</b>	This course introduces the student to the symbols, notations, and abbreviations that make up the architectural alphabet or language of blueprint reading. The student will be acquainted with the basic concepts upon which all construction drawings are read and interpreted, and apply them throughout the course.
<b>Career Cluster</b>	Architecture and Construction
<b>Instructional Level</b>	Technical Diploma Courses
<b>Total Credits</b>	1
<b>Total Hours</b>	36

#### Textbooks

*Understanding Construction Drawings – with 22 Sheets*. 7th Edition. Copyright 2019. Huth, Mark W. Publisher: Cengage Learning. **ISBN-13:** 978-1-337-40863-9. Required.

#### Learner Supplies

Scientific Calculator - \$20. **Vendor:** Campus Shop. Required.

#### Program Outcomes

1. Interpret construction drawings.

#### Course Competencies

1. **Identify the design-construction sequence and the design professionals.**

##### Assessment Strategies

- 1.1. Reflection
- 1.2. Written Objective Test (score 70% or higher)

##### Criteria

*You will know you are successful when*

- 1.1. you list the design/construction sequence.

- 1.2. you describe work that is accomplished in each part of the sequence.
- 1.3. you list construction design professionals.
- 1.4. you describe work that is accomplished by each of these professionals.

#### **Learning Objectives**

- 1.a. Identify the parts of the design-construction sequence.
- 1.b. Identify professionals involved in the design-construction sequence.
- 1.c. Describe what work is accomplished by each of these professionals.

### **2. Explain the importance of drawings.**

#### **Assessment Strategies**

- 2.1. Written Objective Test (score 70% or higher)
- 2.2. Reflection

#### **Criteria**

*You will know you are successful when*

- 2.1. you explain the importance of construction drawings
- 2.2. you describe how the work of one trade has an affect on the work of others
- 2.3. you identify dimensions indicated on a scale.
- 2.4. you identify different types of drawings.

#### **Learning Objectives**

- 2.a. Describe the importance of following a prescribed set of procedures.
- 2.b. Explain the relationships that one trade has with other trades.
- 2.c. Explain the importance of following the Wisconsin Uniform Dwelling Code and the International Residential Code.

### **3. Explain how drawings are produced.**

#### **Assessment Strategies**

- 3.1. Skill Demonstration

#### **Criteria**

*You will know you are successful when*

- 3.1. you recognize oblique, isometric and orthographic drawings.
- 3.2. you identify plan views, elevation views and section views.
- 3.3. you locate the scale notations on drawings.
- 3.4. you use an architect's scale to measure objects drawn to scale.

#### **Learning Objectives**

- 3.a. Recognize oblique, isometric and orthographic drawings.
- 3.b. Draw simple isometric sketches.
- 3.c. Identify plan views, elevations and section drawings.
- 3.d. Identify the scale used on a construction drawing.
- 3.e. Read an architect's scale.

### **4. Identify the different lines, symbols, and abbreviations found on architectural drawings.**

#### **Assessment Strategies**

- 4.1. Skill Demonstration
- 4.2. Written Objective Test (score 70% or higher)

#### **Criteria**

*You will know you are successful when*

- 4.1. you explain the purpose of an object, hidden and phantom, extension, center, cutting plane, and leader lines.
- 4.2. you identify window types by their symbols.
- 4.3. you identify materials by their symbols.
- 4.4. you interpret abbreviations

#### **Learning Objectives**

- 4.a. Identify object, hidden, phantom, extension, center, leader, and cutting plane lines.

- 4.b. Identify door and window symbols.
- 4.c. Identify materials symbols.
- 4.d. Identify electrical and mechanical symbols.
- 4.e. Recognize abbreviations.

## **5. Identify plan views, elevations and section drawings.**

### **Assessment Strategies**

- 5.1. Written Objective Test (score 70% or higher)

### **Criteria**

*You will know you are successful when*

- 5.1. you locate the part of a building from which a section view was drawn.
- 5.2. you describe the appearance of a building from information given on the building elevations.
- 5.3. you identify girders on a foundation plan.
- 5.4. you describe property boundaries from a simple site plan.
- 5.5. you describe types of information illustrated on floor plans

### **Learning Objectives**

- 5.a. Identify the general kinds of information shown on site plans.
- 5.b. Identify the general kinds of information shown on foundation plans.
- 5.c. Identify the general kinds of information shown on floor plans.
- 5.d. Describe the kinds of information shown on elevations.
- 5.e. Identify and explain information shown on section views.
- 5.f. Identify and explain information shown on large-scale detail drawings.

## **6. Interpret drawings for trade information.**

### **Assessment Strategies**

- 6.1. Skill Demonstration
- 6.2. Written Objective Test (score 70% or higher)

### **Criteria**

*You will know you are successful when*

- 6.1. you identify electrical, water and sewage lines shown on a site plan.
- 6.2. you identify thickness, width and reinforcement in a spread footing from a set of drawings.
- 6.3. you describe the length, width and any offsets in a foundation wall from a set of drawings.
- 6.4. you identify different types of framing (platform, balloon, post-and-beam, energy saving) from a set of drawings.
- 6.5. you describe the framing around openings from a set of drawings.
- 6.6. you determine the roof type from a set of drawings.

### **Learning Objectives**

- 6.a. Interpret grading indications on a site plan.
- 6.b. Identify the pitch of drain lines.
- 6.c. Identify all information for a set of drawings pertaining to footing design and foundation walls.
- 6.d. Identify the dimensions of concrete slabs and the reinforcement to be used.
- 6.e. Differentiate the type of framing (platform, balloon, post-and-beam, energy saving) on a set of drawings.
- 6.f. Distinguish the layout of a house from the floor plan.
- 6.g. Characterize typical rough openings.
- 6.h. Identify floor framing components