



Western Technical College

31410339 Commercial Blueprint Reading

Course Outcome Summary

Course Information

Description	This course is designed to provide print reading experience in heavy commercial construction. Students will study concepts regarding elements commonly found on prints of large structures. Included are types of construction, site work, structural steel construction, reinforced concrete construction and finish construction.
Career Cluster	Architecture and Construction
Instructional Level	Technical Diploma Courses
Total Credits	1
Total Hours	36

Pre/Corequisites

Prerequisite 31410329 - Residential Blueprint Reading

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.

Success Abilities

1. Refine Professionalism: Act Ethically

Program Outcomes

1. Interpret construction drawings

Course Competencies

1. Analyze the six main construction systems.

Assessment Strategies

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

Criteria

You will know you are successful when

- 1.1. you describe the six main construction systems.
- 1.2. you describe advantages of the six main construction systems.
- 1.3. you describe specific applications of the six main construction systems

Learning Objectives

- 1.a. Analyze the framing construction system.
- 1.b. Analyze the masonry construction system.
- 1.c. Analyze the heavy timber construction system.
- 1.d. Analyze the structural steel construction system.
- 1.e. Analyze the reinforced concrete construction system.
- 1.f. Analyze the highway, road and bridge construction system (civil).
- 1.g. Identify the advantages of each construction system.

2. Examine the Construction Specifications Institute (CSI) format for written specifications.

Assessment Strategies

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

Criteria

You will know you are successful when

- 2.1. you discuss the Construction Specifications Institute (CSI) format for written specifications.

Learning Objectives

- 2.a. Express the purpose of written specifications for construction drawings.
- 2.b. Explain the various reasons for a standardized form of written specifications.
- 2.c. Examine the CSI master format and relate keynote symbols on a plan to the appropriate specification section

3. Identify information found on "site plans" from a set of architectural drawings.

Assessment Strategies

- 3.1. Skill Demonstration
- 3.2. Written Objective Test (score 70% or higher)

Criteria

You will know you are successful when

- 3.1. you locate information found on "site plans"
- 3.2. you describe the location and orientation of a building based on site plans
- 3.3. you describe building site features based on site plans
- 3.4. you describe the finished landscape appearance based on site plans

Learning Objectives

- 3.a. Examine a topographical drawing of the site plans for information concerning grade lines, datum points, and benchmarks.
- 3.b. Examine a set of site plans for information concerning property lines, building lines, and site utilities.
- 3.c. Identify methods and materials used for the removal and control of storm and surface water on a large building site
- 3.d. Examine a landscaping plan to view the finished appearance of the building site.

4. Identify information from a set of building plans concerning structural steel construction.

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 retrieve information from a set of erection plans
- 4.2. you describe the orientation of structural steel members used in the construction of the building
- 4.3. you identify permanent bracing members used in the erection of a structural steel building
- 4.4. you indicate the type of structural steel used from a symbol indicated on a plan

Learning Objectives

- 4.a. Examine a set of erection plans for information specific to structural steel construction.
- 4.b. Identify information concerning columns from elevation and plan views.
- 4.c. Identify information concerning beams from elevation and plan views.
- 4.d. Identify information concerning bracing members from elevation and plan views.
- 4.e. Identify connection and fastener information from various detail drawings.
- 4.f. Identify anchor bolt information from the lowest level plan view on a set of drawings.
- 4.g. Determine shape of structural steel required according to the symbol listing in the shop detail drawings from a set of building plans.

5. Identify information from a set of building plans concerning reinforced concrete construction.

Assessment Strategies

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

Criteria

You will know you are successful when

- 5.1. you retrieve information from a set of structural drawings
- 5.2. you describe the foundation requirements of a reinforced concrete building
- 5.3. you describe finished floor elevations of at grade and above grade slabs
- 5.4. you identify the forming and reinforcing materials used in a two way joist system
- 5.5. you identify the position, size, reinforcement, and orientation of reinforced columns, pillars, and shade beams

Learning Objectives

- 5.a. Examine a set of building plans for information specific to reinforced concrete construction.
- 5.b. Identify information concerning finished dimensions for concrete structures on a set of building plans.
- 5.c. Identify information concerning footing width and depth on a set of building plans.
- 5.d. Identify information concerning reinforcement requirements of concrete structures on a set of building plans.
- 5.e. Identify information concerning floor control joints from various detail drawings.

6. Identify information from a set of building plans concerning finish construction.

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 the interior finishes of a building as shown on a set of architectural drawings
- 6.2. you identify the exterior finishes of a building as shown on a set of architectural drawings

Learning Objectives

- 6.a. Examine a set of building plans for information specific to finish construction.
- 6.b. Identify the exterior finish of a building from an elevation drawing
- 6.c. Identify information concerning parapet caps from architectural details.
- 6.d. Identify location of cabinet and casework from the floor plans and interior elevation drawings on a set of building plans.
- 6.e. Identify ceiling finish materials and orientation from a reflected ceiling plan
- 6.f. Identify interior finishes to include: floors, walls, and furnishings from a room finish schedule