Western Technical College

31410329 Residential Blueprint Reading

Course Outcome Summary

Course Information

Description	In this course students will study various construction systems as they related to their drawings. Roof framing plans, stair construction from a section drawing, window schedules and catalogs, interior and exterior finishes, multifamily dwellings and code requirements for a residential structure will be referenced for related trade information.
Career Cluster	Architecture and Construction
Instructional Level	Technical Diploma Courses
Total Credits	1
Total Hours	36

Pre/Corequisites

Prerequisite 10410103 Construction Industry Basics

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. Cultivate Passion: Expand a Growth-Mindset
2. Live Responsibly: Embrace Sustainability
3. Live Responsibly: Foster Accountability
4. Refine Professionalism: Act Ethically
5. Refine Professionalism: Improve Critical Thinking

Program Outcomes

1. Interpret construction drawings
2. Interpret building codes

Course Competencies

1. Identify plan views, elevations and section drawings.

Assessment Strategies

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

Criteria

You will know you are successful when

1.1. you locate the part of a building from which a section view was drawn.
1.2. you describe the appearance of a building from information given on the building elevations.
1.3. you identify girders on a foundation plan.
1.4. you describe property boundaries from a simple site plan.
1.5. you describe types of information illustrated on floor plans

Learning Objectives

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

2. Interpret drawings for trade information.

Assessment Strategies

2.1. Skill Demonstration
2.2. Written Objective Test (score 70% or higher)

Criteria

You will know you are successful when

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

Learning Objectives

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

3. Evaluate various building construction techniques.

Assessment Strategies

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

Criteria

You will know you are successful when

3.1. you identify information about roof construction found on a set of drawings.
3.2. you identify cornice construction from a set of drawings.
3.3. you identify the framing of a deck from a set of drawings.
3.4. you identify the basic features of the various door types: panel, flush, hollow core, molded and solid core.
3.5. you describe the exterior wall covering for all parts of a building from a set of plans..

Learning Objectives

3.a. Explore various construction techniques of roof construction and ventilation, window and door schedules, and interior and exterior finishes.
3.b. Interpret information regarding roof framing from a drawing.
3.c. Identify information shown on window and door details.
3.d. Describe the exterior wall covering planned for all parts of a building.
3.e. Describe the framing for a deck.
3.f. Identify the unit rise and run of a staircase from a set of drawings.
3.g. Identify the insulation materials and ventilation methods to be used in walls, floors and ceilings from a set of drawings.
3.h. Identify the wall, ceiling and floor covering material to be used from a set of drawings.
3.i. List the sizes and types of cabinets shown on a set of drawings.

4. Analyze the Uniform Dwelling Code and the International Residential Code.

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 cite differences between the Wisconsin UDC and the IRC.
4.2. you calculate the unit rise and run of a staircase that meets or exceeds code

Learning Objectives

4.a. Discuss the Wisconsin Uniform Dwelling Code.
4.b. Discuss the International Residential Code.
4.c. Review a set of plans to determine if what is drawn meets code

5. Interpret information regarding multi-family dwellings from a set of drawings

Assessment Strategies

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

Criteria

You will know you are successful when

5.1. you identify party walls and area separation walls on a set of blueprints
5.2. you explain how to prevent the transfer of sound from one unit to the next
5.3. you identify materials and methods used in fire rated wall construction

Learning Objectives

5.a. Analyze the design of wall construction between two living units
5.b. Examine party wall and area separation wall construction
5.c. Determine what materials and methods used in party wall construction prevent the spread of fire from one living unit to the next
5.d. Determine what materials and methods used in party wall construction prevent the transfer of sound from one living unit to the next