Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. CRPT COURSE NUMBER: 1142

NUMBER OF CREDITS: 4 Lecture: 1 Lab: 3

Course Title:
Blueprint Reading, Estimating and Project Planning

Catalog Description:
In this course, students will learn to read and interpret residential blueprints and do an accurate “take-off” or estimate of materials needed for a residential structure. Students will also learn site layout and establishing building elevations necessary prior to the excavation of a building site.

FULFILLS MN TRANSFER CURRICULUM AREA(S)

Goal 1: Communication: ____ by meeting the following competencies:

Goal 2: Critical Thinking: ____ by meeting the following competencies:

Goal 3: Natural Sciences: ____ by meeting the following competencies:

Goal 4: Mathematics/Logical Reasoning: ____ by meeting the following competencies:

Goal 5: History and the Social and Behavioral Sciences: ____ by meeting the following competencies:

Goal 6: The Humanities and Fine Arts: ____ by meeting the following competencies:

Goal 7: Human Diversity: ____ by meeting the following competencies:

Goal 8: Global Perspective: ____ by meeting the following competencies:

Goal 9: Ethical and Civic Responsibility: ____ by meeting the following competencies:

Goal 10: People and the Environment: ____ by meeting the following competencies:

Prerequisites or Necessary Entry Skills/Knowledge:
None
### Topics to be Covered

- Types of plans and symbols.
- Reading and interpreting plot plans, basement plans, floor plans and elevations.
- Reading and interpreting section plans and detail plans.
- Window, door, and finish schedules.
- Estimating building materials for residential construction.
- Building codes and permits.
- Project specifications.
- The bidding process.
- Establishing building elevations.
- Building layout prior to excavation.
- Building site prep (excavation).
- Forming for footings.
- Placing concrete footings.

### Student Learning Outcomes

1. Recognize common symbols used on architectural plans.
2. Accurately read and interpret dimensions on architectural plans.
3. Demonstrate an understanding of product detail catalogs.
4. Demonstrate accurate interpretation of information on plot plans, foundation plans, floor plans, elevation views and section plans.
5. Accurately list all building materials required for a residential house based on a given plan.
6. Demonstrate an understanding of bid specifications and the bidding process.
7. Explain the role of subcontractors.
8. Locate lot corner stakes and establish lot boundary.
9. Lay out a house on a lot prior to excavation.
10. Survey grade elevations on a given lot and determine building elevation.
11. Set building corners and lay out building lines.
12. Set forms for foundation footings.
13. Set steel reinforcement in footings per building code requirements.
14. Place concrete for foundation footings.

### Is this course part of a transfer pathway: Yes ☐ No ☒

Revised Date: May 2020