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:** 2220

**NUMBER OF CREDITS:** 5  **Lecture:** 2  **Lab:** 3

### Course Title:
Advanced Concrete Technology

### Catalog Description:
This course is designed to give the student hands-on experience with laying out and squaring up foundation walls and actual construction of various types of foundation structures for a residential home. Also this course covers designing concrete mixtures for specific uses, estimating, pouring consistencies, preparing sub-bases areas and building forms, handling, placement and finishing techniques for vertical and flatwork concrete pours are also included.

### 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
- Various types of foundation materials
- Various types of floor systems
- Various concrete mixes and applications

Student Learning Outcomes
1) Install full basement and floor system.
2) Choose appropriate aggregate materials.
3) Install wood floor systems.
4) Demonstrate excavation and backfill techniques.
5) Build new and/or inspect and repair foundations.

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

Revised Date:  May 2020