

**Document Number:**

Set Document Number

**Departmental Course Outline Form**

**Abbreviated Title (25 chars max):** Soils and Concrete Tech  
**Course Title:** Soils And Concrete Technology

**Dept Abbr(s):** CMSV

**Course Number:** 2100  
**Lecture Hours:** 3  
**Lab Hours:**       
**Total (min-max) Credits:** 3 -    
**Registration Tally:** 40  
**Lab Tally:**     

**Catalog Description:**

Familiarizes students with the history and fundamentals of concrete, admixtures, soils and aggregates. The student will understand the interactions of concrete, weather, and soil conditions; the proper placement of concrete; bearing capacity of soils; and the basic principles of concrete and soil inspection.

**Prerequisites:** None

**Topics: Topics covered and time allotments.**

1. Soil Classification - 10%
2. Upper mid-west geology - 5%
3. Soil exploration and testing - 10%
4. Bearing capacity of soils - 5%
5. Fundamental and history of concrete - 5%
6. Strength, durability, and properties of concrete - 15%
7. Admixtures - 15%
8. Construct forms and place steel reinforcement - 10%
9. Batching and handling concrete - 5%
10. Finishing concrete - 5%
11. Testing and controlling concrete - 15%

**If Qualifying Request for MN Transfer Curriculum, check here**   
**and select 1 or 2 Goals and their Competencies:**

**1<sup>st</sup> Goal:** Select a goal  
**Competencies:**

**2<sup>nd</sup> Goal:** Select a goal  
**Competencies:**

**Document Number:**

<p align="center"><b>OUTCOMES:</b></p> <p>(Include thinking skills/thinking abilities objective(s). A minimum of <i>four</i> measurable course outcomes required.) Refer to Bloom's Taxonomy for appropriate verbs.</p>	<p align="center"><b>OUTCOME MEASURES:</b></p> <p>(Indicate any activity that demonstrates student competence and ways in which the faculty member will ascertain the student learning outcomes.)</p>
<p>Students will be able to:</p> <ol style="list-style-type: none"> <li>1. Classify soils types and their bearing capacities</li> <li>2. Explain the proper installation of concrete forms and steel reinforcement</li> <li>3. Distinguish between different types of concrete and admixtures</li> <li>4. Identify the properties and characteristics of concrete</li> <li>5. Recommend cost effective techniques for the placement and handling of materials</li> <li>6. Interpret plans, specifications and technical drawings</li> <li>7. Prepare technical documents</li> </ol>	<p>The department has agreed that these measures must be used:</p> <p>The instructor may also use any or all of the following measures:</p> <ol style="list-style-type: none"> <li>1. Quizzes</li> <li>2. Papers</li> <li>3. Classroom participation/discussion</li> <li>4. Experiential Learning</li> <li>5. Final test</li> </ol>

**Which of the college-wide learning outcomes does this course investigate?**

- Communication: Students will create shared meaning appropriate to a variety of audiences by writing and speaker.
- Critical Thinking: Students will apply creative, rational, and value-sensitive modes of thought to information and experience.
- Civic Engagement: Students will identify and address issues of public concern through individual and collective actions beyond the classroom.
- None of the Outcomes

If Special Course Fee, check here

**Semesters offered (check appropriate semester(s)):**

<b>Fall:</b>	Every Fall
<b>Spring:</b>	Springs (Variable)
<b>Summer:</b>	Not Offered in Summer

**Evaluate/Grading System (check):**

A – F:	<input checked="" type="checkbox"/>	P / F:	<input type="checkbox"/>	Both:	<input type="checkbox"/>
A-NC Dev. Only:	<input type="checkbox"/>				

All changes are effective the next Fall semester unless noted \_\_\_\_\_

Check all that have changed:

- New Course:
- Deleted Course:
- Course Title:
- Number:
- Hours:
- Credits:
- Tally:
- Description:
- Prereq:
- MTC Goal:
- Outcomes:

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Measures:   
College Wide Goals:   
Semester Offered:   
Grading:

**Submitted by:**

Name(s): Scott Holm/Matt Simoneau

**CURRICULUM COMMITTEE ACTION:**

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**Academic Council Chair**

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**Date Approved**

**Primary CIP Code:** 0412