

**North Dakota State University**  
**Department of Construction Management and Engineering**  
**CM&E 412 Construction Management Capstone/612 - Construction Management**  
**(3 Credits)**  
**Syllabus**

***Course Instructor and Contact Information***

Jeffrey Pfingsten

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Phone: (701) 388-6595 Monday – Thursday 7:00 pm to 9:00 pm

Office Hours: Immediately after class or by appointment

***Bulletin Description***

This course provides a discussion of the organization of project information; contract administration, project delivery systems; construction management methods; constructability review, value engineering; and construction productivity.

***Basic Course Objective***

- 1) Have an understanding about how to administer a construction contract and how to properly utilize the required paperwork necessary for the successful documentation and completion of the project;
- 2) List and explain various project delivery systems including responsibility and authority;
- 3) Describe the types of contractual relationships in construction, and the roles and responsibilities of the key participants;
- 4) Explain basic legal aspects of construction projects, including bid, bonds, insurance requirements;
- 5) Become familiar with the use of various project management systems;
- 6) Define and explain value engineering.
- 7) Describe contract administration and the importance of documenting the process for the successful completion of the project; and
- 8) Understand the project specifications and how they are used to achieve a successful outcome to the project. They will also understand how the specifications work with the construction drawings.
- 9) Describe how construction law, labor relations, safety, risk and liability relate to a project.
- 10) Explain how construction materials and workmanship is incorporated into the contract.
- 11) Describe how drawings and specifications relate to contract administration.
- 12) Describe the measurement and payment for work.
- 13) Define and explain change orders, extra work, claims, and disputes.

***Course Delivery***

CM&E 412/612 - Construction Management is an undergraduate/graduate-level course that is delivered on campus.

***Blackboard***

Blackboard will be used to post information and conduct electronic correspondence. On a regular basis, you will need to login and check for announcements and online assignments.

***Textbook & Software***

Construction Project Administration 9th Edition

Author: Fisk/Reynolds

Publisher: Pearson

This book is also available on-line from a variety of vendors.

Older editions of this text will not correspond to the assigned readings and/or problems.

Course Notes and other relevant course information will be posted on Blackboard.  
Microsoft Project will be used as the computerized scheduling tool for this course.  
Students will be required to download the AIA Document Software Student Edition (free of charge).

### ***Grading***

The grade in this course will be based on major assignments, group project work, and exams.

Individual Assignments and Quizzes – 50 points

Group Project Work 150 points

Three (3) Exams (100 points each)

TOTAL 500 Total Points

Grade Distribution:

90 - 100 A

80 - 89.9 B

70 - 79.9 C

60 - 69.9 D

< 60 F (below 60%)

### ***Policies and Procedures***

Assignments must be submitted to the course instructor on the day that they are due. Late assignments will not be accepted. Exams may be conducted through Blackboard. No make-ups for missed exams.

### ***Students with Disabilities (ADA Statement)***

Any student with disabilities or other special needs, who need special accommodations in this course, is invited to share these concerns or requests with the instructor as soon as possible.

### ***Academic Honesty Statement:***

The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at [www.ndsu.edu/academichonesty](http://www.ndsu.edu/academichonesty).

***CEA Honor System:*** “On my honor I will not give nor receive unauthorized assistance in completing assignments and work submitted for review or assessment. Furthermore, I understand the requirements in the College of Engineering and Architecture Honor System and accept the responsibility I have to complete all my work with complete integrity. Students who are suspected of academic dishonesty may not withdraw from the course in which dishonesty is suspected while the case is under review by the Honor Commission (NDSU Policy 335, 5b).”

### ***Course Schedule and Dates***

Below is the course schedule: Students should expect changes to this schedule and are responsible for adapting to the changes. Assignments and due dates will be posted on Blackboard.

### ***Date Topics, and Exams***

#### **Week 1 (Jan 9)**

Introduction to Course and Project Introduction

Construction Management Code of Ethics

The Project Delivery System

**Week 2 (Jan 16) No Class Monday - Martin Luther King Holiday**

Introduction to Project Requirements and Group Assignments  
Video

**Week 3 (Jan 23)**

Using the Specifications /Specs & Drawings  
Preconstruction Operations  
Preparing the Bid Package

**Week 4 (Jan 30)**

*Pre-Bid Meeting*  
Meetings and Negotiations  
Work Session

**Week 5 (Feb 6)**

Responsibility & Authority  
AIA Document Training  
Bid Opening (& Award)

**Week 6 (Feb 13)**

Pre-Construction Meeting  
*Exam 1*  
Project Planning & Scheduling

**Week 7 (Feb 20) President's Day: No Class Monday**

*Project Meeting*  
Documentation: Records & Reports  
Video

**Week 8 (Feb 27)**

Issues During Construction Phase  
*Project Meeting*  
Construction Labor

**Week 9 (Mar 5)**

Changes and Extra Work  
*Project Meeting*  
Measurement and Payment

**Week 10 (Mar 19)**

Claims and Disputes  
*Project Meeting*  
Responsibility & Authority

**Week 11 (Mar 26)**

Value Engineering  
*Project Meeting*

**Week 12 (Apr 2) Spring Recess: No Class Friday**

*Exam 2*  
*Project Meeting*

**Week 13 (Apr 9) Spring Recess: No Class Monday**

Cost Control

*Project Meeting*

**Week 14 (Apr 16)**

Construction Materials and Workmanship

*Project Meeting*

**Week 15 (Apr23)**

Project Closeout

*Project Meeting*

**Week 16 (Apr 30) Dead Week**

Final Project Due

Video

**Finals Week**

*Exam 3: May 9<sup>th</sup>, 10:30 am – 12:30 pm*