COLORADO STATE UNIVERSITY
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

COURSE OUTLINE

COURSE NO. AND TITLE: CIVE 574- CIVIL ENGINEERING PROJECT MANAGEMENT

CREDITS: 3

TERM: Fall 2016

TIME: Tuesday and Thursday 4:45 – 6:00

LOCATION: Room 202 Weber Building

PREREQUISITES: None

COURSE DESCRIPTION
This course presents an overview of the business of consulting civil engineering and the principles guiding the effective management of civil engineering projects.

INSTRUCTORS
Mark S. Abshire, MS, PE, and Dr. Howard Perko, Ph.D., PE, Affiliate Faculty, are CSU alumni and bring more than 40 years of combined project engineering and project management experience to the classroom. Mr. Abshire is a senior geotechnical engineer with a local engineering firm and Dr. Perko is on the board of directors for a civil engineering product manufacturing company, Magnum Piering, Inc.

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Howard Perko
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Office Hours: By Appointment

TEXTBOOK
None

COURSE OBJECTIVES
The objective of the course is to present an introduction to the business of consulting civil engineering and the principles guiding the effective management of civil engineering projects. Topics covered will include engineering business management, project structure, project pursuit, staffing, contracts, scheduling, execution, tracking, budgeting, quality assurance, deliverables management, record keeping, client management, risk management, business development and networking, personal management, business communication skills, and other relevant topics.

The successful student will:

1. Acquire a basic understanding of the principles of civil engineering project management and the business of civil engineering;
2. Understand how projects are effectively, efficiently, and profitably managed;
3. Understand how risks to civil engineering projects are introduced and managed, and
4. Be able to apply project management tools to an example engineering project.

INSTRUCTIONAL METHODOLOGY

The course will meet for two 75-minute lectures per week.

MODE OF DELIVERY

Presentation will consist principally of classroom lectures, which will include guest lecturers. Students are expected to read all required material from handouts and assigned books.

CLASS ATTENDANCE

Students should attend all classes to obtain maximum educational benefits. Absence or lateness does not excuse students from required course work. Students must inform the instructor prior to the anticipated absence and take the initiative to make up missed work in a timely fashion.

READING ASSIGNMENTS

Reading assignments will be given during class. Students are expected to read all material in preparation for class. All material from reading assignments will be subject to homework, quizzes and exams.

METHODS OF EVALUATION

The final course grade will consist of exams, homework, quizzes, and projects. Course grading distribution will be as follows:

- Exams 60% (3 @ 20%)
- Project 15%
- Homework 15%
- Quizzes 10%

Term grades for this course will use the ± grading system as described in the CSU catalog. The following scale will be used: A ≥ 93; A- ≥ 90; B+ ≥ 87; B ≥ 83; B- ≥ 80; C+ ≥ 77; C ≥ 70; D ≥ 60; F < 60.

As in the practice of consulting engineering, the student will be challenged on both individual effort and team effort and performance; students will be evaluated on both. Class participation, initiative, and leadership efforts will be strong evaluation criteria. Communication skills will also be strongly emphasized; technical writing and presentation skills will be key grading criteria. Extra credit opportunities will be provided throughout the course.

ACADEMIC AND PROFESSIONAL INTEGRITY

While problems of this nature are not anticipated, please be advised that there are penalties and other serious consequences, as described in the Colorado State University Regulations whenever a student is involved in academic dishonesty. For further details on this issue please review the University rules on the following website: www.conflictresolution.colostate.edu.

TENTATIVE COURSE SCHEDULE:

Week		Lecture	Date	Topic
1	Module 1: Business and Personal Skills	1.1	23-Aug	Course Introduction
		1.2	25-Aug	Client Partnership Skills/Handling Objections/Classroom Exercise
2		1.3	30-Aug	Negotiation Skills Training & Classroom Exercise
		1.4	1-Sept	Time Management and Motivation (golf balls, pie, and triangle)
3		1.5	6-Sept	Psychology of Clients and Employees (Enneagram)
		1.6	8-Sept	Business Law (IP/Entity Types/Corporations/Minutes/Contracts)
4		1.7	13-Sept	Finance and Business Planning
		1.8	15-Sept	Naming/Branding/Marketing/Market Projections (Features-Benefits)
5		1.9	20-Sept	Basic Accounting & Journal Entries
		1.10	22-Sept	Reading Financial Statements (Margin vs. Markup, cards)
6		1.11	27-Sept	Accounting Software Exercise, Billing, Timesheets
		1.12	29-Sept	Business Valuation & Transition Planning
7		1.13	4-Oct	Project Help Session, Exam 1 Review
		1.14	6-Oct	**Business Plan Projects Due / Exam 1 (20%)**
8	Module 2: Project Management	2.1	11-Oct	Consulting Overview- The Business of Engineering
		2.2	13-Oct	Project Management Overview: Scope, Schedule, Budget, Quality
9		2.3	18-Oct	Proposals: Finding work, RFPs, Go/No-Go
		2.4	20-Oct	Proposals: Scoping, Pricing, WBS
10		2.5	25-Oct	Proposals: Submittal, Scoring, Win-Lose, Follow-up
		2.6	27-Oct	Contracts: Purpose, Types (CPFF, T&M, GMP, etc.)
11		2.7	1-Nov	Contracts: Key Components (Scope, POP, Ts & Cs, Price)
		2.8	3-Nov	Project Execution: Kickoff, Scheduling, Coordination, Budget Control
12		2.9	8-Nov	Project Execution: Deliverables, Change Orders, QA, Doc Control
		2.10	10-Nov	Project Closeout: Filing, assessment, client satisfaction survey
13		2.11	15-Nov	Ethics: PE Regs, ASCE Canons, Standard of Care
		2.12	17-Nov	Risk Management: Sources, Cost, Case Histories, Mitigation
14			22-Nov	Fall Break
			24-Nov	Fall Break
15		2.13	29-Nov	Exam 2 Review
		2.14	1-Dec	**Exam 2 (20%)**
16		2.15	6-Dec	Risk Management Exercise, Miscellaneous Topics
		3.1	8-Dec	Exam 3 Review
17		30	TBD	**Comprehensive Exam 3 (20%)**