

CEE 409 & 609 ENGINEERING PROJECT MANAGEMENT

University of Nevada, Las Vegas

Civil and Environmental Engineering and Construction Department

Course Information:

Semester: Fall 2022

Lecture Day: Monday and Wednesday

Lecture Time: 5:30 p.m. – 6:45 p.m.

Classroom: TBD

Credit Hours: 3

2021-2022 Undergraduate Catalog Description:

Engineering aspects of contracts, labor law, specification development, and cost estimating. Project scheduling and cost using critical path methods.

Prerequisites by Topic:

EGG 307, STAT 463 or equivalent

Computer Usage:

Microsoft Excel and Word Processing.

Course Format:

Remote Teaching by uploading the videos (Exams and Quizzes will be on the day and time scheduled). The first day of the class will be live in which the instructor will go through the syllabus and the take questions from students about the course. Then the videos for each chapter will be uploaded in Canvas in Panopto Recordings section. The instructor will be available in the WebEx during the class hours if the student asked to be in the class. However, the instructor can email students, if he is unable to be in the WebEx. The student can send an email to the instructor at any time to meet in WebEx for course assistance.

Attendance will not be taken. The exams and the quizzes will be conducted during the scheduled time and day. The quiz will start at 5:30 pm and ends at 5:45 pm during the day it is scheduled. I have reserved rights to conduct some live WebEx classes during any days. The students will be notified about a week before the live WebEx class is scheduled.

Course Requirements:

Students will engage in the following activities:

- Attend the live class
- Attend the quizzes
- Read assigned material prior to class sessions
- Watch the uploaded class material videos
- Complete homework

- Complete class assignments
- Complete major examinations
- Complete a final examination

Late Policy:

NO late homework or tests. So don't even ask!

Class Attendance Policy:

Class attendance is vital for student and professor communication and learning. Attendance is not mandatory. The following is directly quoted from the Fall 2017- Spring 2018 University Undergraduate Catalog: <http://catalog.unlv.edu/index.php>

“Class Attendance Policy: Registration in a course obligates the student to be regular and punctual in class attendance. Students who without previous arrangement with the instructor or department fail to attend the first two class meetings of a course that meets multiple times per week or the first meeting of a class that meets one time per week may be dropped from the course. Nonattendance for a web-based course shall be defined as failure to log onto Web Campus or other instructor-designed website within one week of course start date without previous arrangements with the instructor or department. A student may be dropped for nonattendance only during the regular drop/add period of the term. Nonattendance does not release students from the responsibility to officially drop any course for which they have enrolled and choose not to complete, nor from financial obligation to pay for the course.

Class Absences: There are no official absences from any university class. It is the student's responsibility to consult with the teaching faculty regarding absences from their class. Students may be dropped from classes for nonattendance during the first week of instruction upon notification by the instructor.

It is the policy of the Nevada System of Higher Education to be sensitive to the religious obligations of its students. Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The makeup will apply to the religious-holiday absence only. It shall be the responsibility of the student to notify the instructor no later than the last day of late registration of his or her intention to participate in religious holidays that do not fall on state holidays or periods of class recess. This policy shall not apply in the event that administering the test or examination at an alternate time would impose an undue hardship on the instructor or the university that could not reasonably have been avoided.

Any student who is denied a make-up option after appropriately notifying the teaching faculty, shall have the right to appeal that decision through the normal appeal mechanism in place at the university.”

At the instructor's sole discretion employment-related absences may be independently verified with the human resources department. If your human resources manager will not

provide the necessary documentation then the absence is unexcused. Medically-excused absences must be accompanied by an official document written by a physician. More than six (6) or more unauthorized class absences will result in a failing grade. **The student is personally** responsible for acquiring the information missed as a result of an absence, excused or otherwise. If you miss class for any reason, you are still responsible for the material and content of the class and for any assignment given for the next class. Also, assignments must be submitted when due even if the student will be absent from class on the due date. Students who are not present for the entire class period or who are unprepared for class may also accrue absences. Late arrivals, early departures, and class sessions for which you are unprepared are all considered equivalent for grading purposes. Religious holidays and university activities are covered in a later section. For more details about missed classes

and absences you may access at:

<http://catalog.unlv.edu/content.php?catoid=4&navoid=164>

Student Learning Outcomes (SLO):

- Students will be able to read contracts and specifications and use project management concepts in their design or construction projects.
- Students will be able to prepare a cost estimate of design or construction projects.
- Students will be able to prepare a schedule of design or construction projects.
- Students will be able to explain the cost estimate and schedule of design and construction projects.

Required and/or Recommended Books and Materials:

Recommended Books:

- *Project Management for Engineering & Construction, 3rd edition*, Garold D. Oberlender, McGraw-Hill Book Company, 2014.
- *Estimating Construction Costs, 6th edition*, by R. L. Peurifoy and G. D. Oberlender, McGraw-Hill Book Company, 2002.
- *Construction Planning and Scheduling, 3rd edition*, Jimmie W. Hinze, Pearson Prentice Hall, 2008.

Course Topics:

The following topics will be covered in the course. The following listing is a general indication of the order of their coverage. However, I reserve the right to change the order of coverage and the topics to be covered based upon the class's performance and interests.

- Preconstruction Phase of the Project
- Project Delivery Methods
- Contract Procurement
- Detailed Cost Estimating
- Project Scheduling Process

- Project Control

Out-of-class Assignments and Due Dates (Refer to the schedule in the last page)

Assignment Weights:

- Mid Term Exam I: 30%
- Final Exam: 35%
- Homework: 20%
- Quizzes: 15% (*out of five, the top 4 quizzes will be considered for the quiz grade*)
- **Total: 100%**

Extra Credit Assignment Options:

Professor, at his sole discretion, may provide students with an opportunity to complete extra credit test or assignments.

Homework:

Homework will be due on the day and time mentioned in the homework paper. Assignments must be submitted before or when due in email. All problem-solving/computation homework will be done in Excel or Word. Homework can be completed on the normal paper and scanned and submitted by the email. Homework *should not be* submitted in Canvas.

Communication Skills:

Communication skills are paramount to a successful career. Therefore, communication skills, written and oral, will be evaluated in all coursework. Lengthy and major assignments involving significant writing will have writing as 30 percent of their evaluation criteria. The laboratory part of this course will include the report writing. To get more help about writing you may access at: <http://writingcenter.unlv.edu/>

Examinations:

Examinations will be opened book and opened notes. Missed examinations will count as zero if prior authorization is not granted. The honor system is observed. Make-up examinations will be given under **extraordinary** circumstances only. No make-up examinations will be given beyond one week (7 days) after the original exam date regardless of reason. Make-up examinations will cover material similar to the original exam, but may be of a different format and different composition of types of questions.

Grading Scale:

Letter Grade	Score Range	Subjective Criteria	Range
A	> or equal to 90%	Superior knowledge	Acceptable

Letter Grade	Score Range	Subjective Criteria	Range
B+	87 – < 90%	Good knowledge	Acceptable
B	80 - < 87%	Above average knowledge	Acceptable
C+	77 - < 80%	Minimum knowledge	Marginally Acceptable
C	74% - <77%	Minimum knowledge	Marginally Acceptable
C-	70 – < 74%	Minimum knowledge	Marginally Acceptable
D+	67 - < 70%	Minimum knowledge	Marginally Acceptable
D	60 - < 67%	Minimum knowledge	Marginally Acceptable
F	Below 60%	No knowledge	Not Acceptable

Other Pertinent Information

Final Date: to drop or withdraw from this class, or change from credit to audit, without refund is October 29, 2022.

Date, Time, and Location of Final Examination: Please see attached schedule at the end.

University Policies

Public Health Directives

Face coverings are currently mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found at [Health Requirements for Returning to Campus](https://www.unlv.edu/coronavirus/health-requirements), <https://www.unlv.edu/coronavirus/health-requirements>. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the [UNLV Student Conduct Code](https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf), https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf, including being administratively withdrawn from the course.

Academic Misconduct

Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV’s educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the [Student Conduct Code](https://www.unlv.edu/studentconduct/student-conduct), <https://www.unlv.edu/studentconduct/student-conduct>.

Auditing a Course

Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of devices such as cellular phones and pagers, or other potentially disruptive activities are only permitted with the prior explicit consent of the instructor. Students are specifically prohibited to record classes without instructor authorization, including online/remote classes (either audio only, or video and audio). The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course.

Since the COVID-19 pandemic forced some instruction to be delivered remotely starting in Spring 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term. Recorded lectures must be stored securely, and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning that the recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted. Class recordings are protected from disclosure, as they are deemed part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

Copyright

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional [copyright policy information](https://www.unlv.edu/provost/copyright) is available at <https://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC)

The [UNLV Disability Resource Center](https://www.unlv.edu/drc) (Student Services Complex, SSC-A, Room 143, <https://www.unlv.edu/drc>, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to a

permanent disability, temporary or permanent medical need, or academic support due to pregnancy are encouraged to contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. Students who are already registered with the DRC should request their accommodations online each semester, and make an appointment to discuss their accommodations with their instructors.

Final Examinations

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the [Final Exam Schedule](https://www.unlv.edu/registrar/calendars), <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the [Student Academic Misconduct Policy](https://www.unlv.edu/studentconduct/misconduct/policy), <https://www.unlv.edu/studentconduct/misconduct/policy>, which states that “acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment” is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the [Acceptable Use of Computing and Information Technology Resources Policy](https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy), <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades

The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of

“F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

Library Resources

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the [Libraries’ Research Consultation](https://guides.library.unlv.edu/appointments/librarian) website, <https://guides.library.unlv.edu/appointments/librarian>. You can also [ask the library staff](https://ask.library.unlv.edu/) questions via chat and text message at <https://ask.library.unlv.edu/>.

Missed Classwork

Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Classwork policy, under Registration Policies, on the [Academic Policies](#) webpage.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student submits official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail

Rebelmail is UNLV's official email system for students and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Sending emails within WebCampus-Canvas is also acceptable.

Tutoring and Coaching

The Academic Success Center (ASC), at the Claude I. Howard Building, provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the [ASC website](https://www.unlv.edu/asc), <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the [Writing Center](https://writingcenter.unlv.edu/), <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3-301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Disclaimer:

The contents of this document are to be considered "tentative" and subject to change as the instructor deems necessary.

Course Schedule & Assignment

Date	Class	Topics	Readings	Schedule
M, 8/23	1	Introduction & Syllabus	-	
W, 8/25	2	Preconstruction Phase	-	
M, 8/30	3	Project Delivery Methods		
W, 9/01	4	Contract Procurement		
M, 9/06	-	Labor Day Recess		
W, 9/08	5	Bid Documents/ Detailed Cost Estimating	Ch. 2 and 3 Peurifoy	Assign HW # 1
M, 9/13	6	Labor Costs Analysis	Ch. 5, Peurifoy	Quiz # 1
W, 9/15	7	Equipment Costs Analysis	Ch. 5, Peurifoy	
M, 9/20	8	Cycle Times & Production Rates	Ch. 6, Peurifoy	
W, 9/22	9	Earthwork & Excavation Cost Analysis	Ch. 7, Peurifoy	
M, 9/27	10	Highways & Pavement Cost Analysis	Ch. 8, Peurifoy	
W, 9/29	11	Foundations Cost Analysis	Ch. 9, Peurifoy	
M, 10/04	12	Indirect Cost Analysis	RSMMeans	Due HW # 1/ Quiz # 2
W, 10/06	13	Review of midterm exam	-	Graded HW # 1
M, 10/11	-	Mid-term Exam	-	
W, 10/13	14	Developing a Schedule Network Model	Ch. 2, Hinze	Assign HW # 2
M, 10/18	15	Activity on Arrow (AOA) Diagram	Ch. 16, Hinze	
W, 10/20	16	Calculating TF and FF in AOA Network Diagram	Ch. 16, Hinze	
M, 10/25	17	Activity on Node (AON) Diagram	Ch. 3, Hinze	
W, 10/27	18	Various Relationships in AON Diagram	Ch. 3, Hinze	
M, 11/01	19	Identifying Critical path and calculating Total Floats (TF) and Free Floats (FF)	Ch. 3, Hinze	Quiz # 3
W, 11/03	20	Project Scheduling of Repetitive Projects	Ch. 3, Hinze	-
M, 11/08	21	Project Scheduling of Repetitive Projects	Ch. 6, Hegazy	Assign HW # 3
W, 11/10	22	No Videos	Ch. 6, Hegazy	Due HW # 2
M, 11/15	23	Resource Management	Ch. 7, Hegazy	
W, 11/17	24	Project Financing (Cash flow analysis)	Ch. 10, Hegazy	Quiz # 4
M, 11/22	25	Project Financing/ Integrated Cost/Time	Ch. 9, 10, Hegazy	
W, 11/24	26	Integrated Cost & Time Method	Ch. 9, Oberlender	
M, 11/29	27	Earned Value Method	Ch. 9, Oberlender	
W, 12/01	28	Final Exam Review	-	Due HW # 3/ Quiz # 5
M, 12/6	-	Final Exam (6:00 P.M. – 8:00 P.M.)		Remote