



CONE 321.001 Construction Estimating

COURSE SYLLABUS: Fall 2019

INSTRUCTOR INFORMATION

Instructor: Jaeheum Yeon, Ph. D.
Assistant Professor
Construction Engineering
Department of Engineering & Technology
Texas A&M University-Commerce

Office Location: AGIT 119

Office Hours: T, R (1 PM – 6 PM) or by appointment

Office Phone: (903) 468 - 8115

Office Fax: 903-886-5960

University Email Address: Jaeheum.Yeon@tamuc.edu

Preferred Form of Communication: email

Communication Response Time: within 2days

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required

- Construction Estimating using Excel (3rd Edition)
 - ISBN: 978-0134405506
 - Author: Steven Peterson

- Building Construction Costs (RSMeans 2018)
 - ISBN: 978-1946872012
 - Author: Gordian

Software Required

- Microsoft Excel

Optional Texts and/or Materials

- None

Course Description

The syllabus/schedule are subject to change.

This course is a study of the principles and application of construction estimation, including quantity takeoff; pricing of materials; and classification of work, labor, overhead, specifications, bid procedures, and project scheduling. Students will be introduced to computerized estimation and scheduling software.

Prerequisites: Lvl U CONE 221 Min Grade C and (Lvl U ENGR 207 Min Grade C or Lvl U ENGR 2308 Min Grade C)

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Compute the Work Breakdown Structure of a construction project, dividing it into manageable building components.
2. Select the appropriate cost data associated with each building component from historical cost indexes.
3. Use software to estimate the cost of a construction project.
4. Write a technical report as a bid package and give a professional presentation as a team.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

- Prerequisites: MATH 142, or concurrent enrollment
- Students must be able to access the Internet, use the D2L learning management system, and use Microsoft Office tools (Word, Excel, PowerPoint).

Instructional Methods

This course is an enhanced course. This means course materials and lecture notes will be provided via a course website on D2L. All announcements will be posted on the course website as well. Assignments will be asked to be submitted in class or on the course website. Students' grades for assignments and exams will be indicated on the submitted papers if available and on the course website.

Student Responsibilities or Tips for Success in the Course

To be successful in this class, the student must:

- Attend all classes
- Arrive for class on time (late arrival will count as an absence)
- Actively participate in class work and discussions
- Regularly log into the course website
- Perform research and homework supporting class learning objectives
- Participate as both an individual and as a team member on projects
- Prepare and provide presentations for research and/or projects

GRADING

The syllabus/schedule are subject to change.

Final grades in this course will be based on the following scale:

- A = 90%-100%
- B = 80%-89%
- C = 70%-79%
- D = 60%-69%
- F = 59% or Below

Assessments

Student's final grade will be assessed based on the following:

1. Attendance: 10%
2. Assignments: 20%
3. Team Project: 20 %
4. Midterm: 20%
5. Final Exam (Final Report + Final Presentation): 30%

TECHNOLOGY REQUIREMENTS

Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
----------------	-------------------------------------	---------------------------------------

The syllabus/schedule are subject to change.

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or point release of that major version) and the previous major version of iOS (the latest minor or point release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
 - 512 MB of RAM, 1 GB or more preferred
 - Broadband connection required courses are heavily video intensive
 - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- You must have a:
 - Sound card, which is usually integrated into your desktop or laptop computer
 - Speakers or headphones.
 - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site](http://www.java.com/en/download/manual.jsp)
<http://www.java.com/en/download/manual.jsp>
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

The syllabus/schedule are subject to change.

Pop-ups are allowed.
JavaScript is enabled.
Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
 - [Adobe Reader](https://get.adobe.com/reader/) <https://get.adobe.com/reader/>
 - [Adobe Flash Player](https://get.adobe.com/flashplayer/) (version 17 or later) <https://get.adobe.com/flashplayer/>
 - [Adobe Shockwave Player](https://get.adobe.com/shockwave/) <https://get.adobe.com/shockwave/>
 - [Apple Quick Time](http://www.apple.com/quicktime/download/) <http://www.apple.com/quicktime/download/>
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

Brightspace Support

Need Help?

Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words "[click here](#)" to submit an issue via email.



The syllabus/schedule are subject to change.

System Maintenance

Please note that on the 4th Sunday of each month there will be System Maintenance which means the system will not be available 12 pm-6 am CST.

Interaction with Instructor Statement

Preferred communication and response time to communication, as well as office hours are identified in the paragraphs above in this syllabus.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Attendance/Lateness, Late Work, Missed Exams and Quizzes are identified in the paragraphs above in this syllabus.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette](#)

<http://www.albion.com/netiquette/corerules.html>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

The syllabus/schedule are subject to change.

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

The syllabus/schedule are subject to change.

CONE 321 Construction Estimating / CALENDAR

Week	Subjects	
	Tuesday	Thursday
1	1: The Art of Estimating 2: Overview of the Estimating and Bidding Process 3: Introduction to Excel	1: The Art of Estimating 2: Overview of the Estimating and Bidding Process 3: Introduction to Excel
2	4: Fundamentals of the Quantity Takeoff 5: Concrete 6: Masonry *Introduction of Team Presentation *Team Presentation Example	7: Metals 8: Woods, Plastics, and Composites *WBS/OBS *RSMMeans *Estimating Example
3	9: Thermal and Moisture Protection 10: Openings	11: Finishes 12: Fire Suppression
4	13: Plumbing 14: HVAC	15: Electrical 16: Earthwork
5	17: Exterior Improvements 18: Utilities (#1 Team Presentation)	19: Material Pricing 20: Labor Productivity and Hours
6	21: Labor Rates 22: Equipment Costs (#2 Team Presentation)	23: Crew Rates 24: Subcontract Pricing
7	25: Markups 26: Pricing Extensions (#3 Team Presentation)	27: Avoiding Errors in Estimates 28: Submitting the Bid
8	Midterm Exam	
9	29: Project Buyout 30: The Estimate as the Basis of the Schedule (#4 Team Presentation)	31: Ethics 32: Converting Existing Forms
10	33: Creating New Forms 34: Proposals and Beyond (#5 Team Presentation)	Work Day for Final Project
11	Work Day for Final Project	Work Day for Final Project
12	Work Day for Final Project	Work Day for Final Project
13	Work Day for Final Project	Thanksgiving
14	Work Day for Final Project	Work Day for Final Project
15	Work Day for Final Project	Work Day for Final Project
16	Final Exam	

The syllabus/schedule are subject to change.