

MEMORANDUM FOR STUDENTS ENROLLED IN CMGT 3312

SUBJECT: CMGT 3312 ADVANCED ESTIMATING

**Course Specific Policies**

1. CMGT 3312 ADVANCED ESTIMATING

Class Meets: Mon/Wed/Fri 11:15 -12:10. (unless otherwise specified)

Room: RBN 2012

Office Hours: Mon/Tues/Thru/Fri (1:00 – 3:00 PM)

Instructor: Dr. Gilbert Abel

Office: Ratliff Building South (RBS) 1036

Office Phone: (903) 565-5890

Email: gabel@uttyler.edu

2. Welcome to CMGT 3312 – Advanced Estimating.

Advanced Estimating is the second of a two course series on estimating. During the upcoming semester you will find our study of Estimating to be interesting, challenging, and rewarding. In this course you will learn about quantification and pricing of direct field costs and general condition costs from construction documents; the preparation of complete lump sum bid package ready for project execution; & utilization of complete set of contract documents. We will meet according to the course schedule (See Attachment I) which also includes the course topics.

CMGT 3312 (maybe) a hybrid course, meaning part of the class will be face-to-face and the other portion of the class will be online. The class is not 100% online, but the majority of class content will be posted online such as PowerPoint Lectures, assigned Homework, and additional resources. In class, students will receive a chance to do more hands-on learning activities specific to course objectives. Most class activities and homework will be to help aid in doing your semester project.

This course is not PATSS certified. I will be working on developing this course this semester to receive PATSS certification next year, but you will not receive less content than future classes taught. It is my intent to add an estimating software component to this class. In order to stay current with the demand of construction industry this will be an important part of the class. For this course, we will use Plan Swift for the class estimating software.

3. If you will miss a scheduled class, you are still responsible for the material.

4. You are encouraged to seek additional instruction during my office hours or by appointment.

5. Class Room Procedures:

a. I will take attendance in class – please ensure information is circulated and returned by end of class.

b. Bring study notes, textbook, note-taking material, and calculator to every class. You may not borrow or exchange calculators during graded events. If your calculator fails during a graded exercise, I am not responsible to furnish a substitute. Class preparation is your individual responsibility. Please refer to Calculator Policy below.

c. Textbooks:

Pratt, David. *Fundamentals of Construction Estimating*, 3rd edition, 2011, ISBN 978-81-315-1868-7.

d. Quizzes: There (may be) reading quizzes throughout the semester. These quizzes are not meant to be tricky, but rather to encourage each of you to read the required assignment and reward those who do. Please take the time to do the **practice quizzes** provided by instructor in class. At the end of each module online there will be a quiz. The quizzes are graded. The best way to do the quizzes is to (1) read assigned chapter for the week; (2) take the practice quiz; (3) listen to the PowerPoint for the module reviewing; and (4) take the quiz online at the end of the module. The online quizzes are for a grade, but it should not be an issue if you follow the steps provided. The quizzes will help you with exams in the class and a good study aid.

Pop Quizzes: Throughout the semester, you (may) receive a pop quiz if the instructor feels as though it is needed to help students prepare for class. Most in class quizzes will be announced or mentioned by the instructor. But it is the student's responsibility to prepare for all classes. Pop Quizzes are not included in the final grade information below. As of now there will not be any pop quizzes, but if needed the pop quizzes will be added to professional grade in the class.

## 6. Canvas Information

a. Course material will be posted on Canvas. Canvas enrollment is now automatic with course registration, but you should ensure that you can access the class Blackboard page.

b. I may also on occasion email homework tips or points of clarification that are made aware to me outside of class. All email correspondence will take place through the Canvas system, and therefore using your Patriot email accounts; so check your Patriot email account **daily**.

## 7. Exams and Grading:

## a. Course Points

Section Exams (2 at 250 each)	500 Points (25%)
Homework (11 Assignments)	250 Points (12.5%)
Assignments (10 assignments)	300 Points (15%)
PlanSwift Tutorials	150 Points (7.5%)
Semester Project	600 Points (30%)
No Final Examination	0 Points (0%)
Professional Grade/Class Activities	200 Points (10%)
<b>Total Points</b>	<b>2000 Points (100%)</b>

## Grade Scale:

A+	96.67%	1933
A	93.33%	1866
A-	90.00%	1800
B+	86.67%	1733
B	83.33%	1666
B-	80.00%	1600
C+	76.67%	1533
C	73.33%	1466
C-	70.00%	1400
D	65.00%	1300
F	<65.00%	<1300

Standard DEPARTMENT cutoffs for your personal growth are shown above. UNIVERSITY GRADE BREAKS WILL BE USED IN FINAL GRADE POSTING.

If you earn a cumulative average of less than 65% on all exams, or if you fail to earn at least 50% on the final exam you may fail the course, regardless of your course grade. Of course, final grades are only A, B, C, D, F. Therefore, a C- is a C for a final grade. The distribution shown above is to graphically remind you of how well you are doing.

## b. Section Exams and Final Exam:

1) The dates for all exams are included in the course schedule. Official reasons for missing an exam are outlined in the UT Student Handbook. You are required to take a make-up Exam, regardless of your reason for missing the scheduled Exam. Report any conflict to me as soon as possible prior to the Exam.

2) The **section exams and final exam** are **closed book**. You can use a **TI-30 calculator**.

3) Use the restroom prior to coming to class to take an exam! Suspicious restroom breaks in the middle of an exam are not acceptable.

4) **Solutions to exams will not be posted on Blackboard**, but you may stop by office and see exam solutions.

c. Calculator Policy:

Only NCEES approved calculators will be permitted during tests. Your test will be collected and grade will be a zero if you are caught using a non-approved calculator.

d. Laptops/PDAs/MP3 players/Cell Phones or other electronic devices: The use of any electronic device, except an approved calculator, **is not permitted during exams**. Your exam will be collected and your grade will be a zero if you are caught using a non-approved electronic device. The use of phones and MP3 players is not permitted during lessons.

e. Collection of Student Work: Throughout the semester I will collect student work (best, average, and worst) for the ABET course and outcomes notebooks. This will require me to make a copy of your work, keep your original and return a copy of the graded work to you. I will not draw attention as to what level of work you accomplished.

f. Embedded indicators of accomplishment of program outcomes: At times throughout the semester, portions of student work will be analyzed to determine if our program is accomplishing stated program outcomes based on established metrics. **If your work is below the minimum established metric, the instructor may ask for you to repeat the assignment for a better grade. If you do not make an effort to improve your grade, this will reflect upon your professional grade in the class.**

8. Homework:

**HOMEWORK FORMAT:** The production of a neat, organized, high-quality homework assignment cannot be overestimated nor can its importance to your course grade be overstated. A homework assignment should be something you are proud of and not something hastily “slapped together”. Toward this end, considerable emphasis will be placed on not only getting the correct answer but also on how the solution is presented.

**Please turn all your work in with a cover sheet. It should look as follows:**

Name (Team Name)  
Homework #  
CMGT 3312 Advanced Estimating  
The University of Texas at Tyler  
Department of Construction Management  
Due Date

**Please center information for the cover page!**

**All homework is mandatory and becomes part of your grade. All homework should be turned in at the beginning of class and not online, unless otherwise specified.** There will be a class folder to turn in your homework. Failure to submit any required homework **will result in an incomplete**. As a construction manager your goal is to make a clear, logical, and professional presentation of your work, which is both accurate and correct. As such both your presentation and the accuracy of your work are important, and both will be graded. It is critical that you show all of your work and leave “footprints” so that it can be easily followed.

a. Papers/Problem Sets:

1) **Use Engineer paper for assignments or full-page printouts Word, Excel, or Powerpoint.** You may neatly tape or glue short computer printouts onto Engineer paper at the appropriate place in the logical flow of the problem. Only use one side of a page. Clearly present **a brief problem statement and a sketch** with your solution. Clearly and concisely explain each **step**. **If you are writing out a paragraph or more, you must type it.** Always follow grading rubric for paper assignments.

2) **Late Submissions.** It is a basic principle of professionalism that **“Professionals are not late.”** A “COORDINATED LATE” submission occurs when you will miss the deadline for a graded homework assignment and you contact me in advance. Notification immediately before the submission will not suffice. Deductions to your assignment grade for late submissions will be given as follows:

1. 0-24 hours late a deduction of 25% of the earned grade
2. 24-48 hours late a deduction of 50% of the earned grade
3. More than 48 hours late No credit. **Assignments must still be submitted.**

Obviously there are circumstances that can occur that make a timely submission impossible and I will work with you when and if they occur. ***I will not play the game of having a stack of incomplete homework assignments turned in on the last day of class. Late assignments should still be submitted within a week unless you coordinate otherwise with me. Habitually late homework WILL have a significant negative impact on your professional practice grade!***

b. Assigned readings: Doing the assigned reading prior to class will help you to understand the material presented during the instruction and will fill in gaps for things we do not cover (***I will not cover everything***). It will also make you more familiar with terms and concepts to be covered. Reading the assignment prior to attending class will enhance your ability to learn!

9. **There is only one extra credit:** It is to attend senior presentation day on April 25, 2017; Tuesday. The department has decided to make this a mandatory attendance as it is a part of the tradition for our program we are building for seniors.

10. **Professional Practice.** During this semester, a portion of your grade in this course (10%) will be derived from a level of professional practice expectations. These expectations include a professional demeanor and work ethic (attitude), consistent daily preparation (assignment reading, appropriate materials brought to class, homework completed on time, etc.), commitment to learning and fulfilling obligations (attendance, on time), and being engaged in class activities (participation) **worth 100 points of the 200 points given for the professional grade.**

11. **Academic Dishonesty:** Representation of other's work as your own will not be tolerated. Cheating on examinations, quizzes, and homework and the false representation of work will be interpreted as academic dishonesty. Academic dishonesty will be subject to disciplinary actions as outlined by the UT Tyler Student Guide on Conduct and Discipline.

12. **Semester Project Outline- (See Attachment 4).**

13. **University Policies**

### **Students Rights and Responsibilities**

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: <http://www2.uttyler.edu/wellness/rightsresponsibilities.php>

### **Grade Replacement/Forgiveness and Census Date Policies**

Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include:

- ☐ Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- ☐ Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- ☐ Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- ☐ Being reinstated or re-enrolled in classes after being dropped for non-payment
- ☐ Completing the process for tuition exemptions or waivers through Financial Aid

### **State-Mandated Course Drop Policy**

Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another

2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

### **Disability Services**

In accordance with federal law, a student requesting accommodation must provide documentation of his/her disability to the Disability Services counselor. If you have a disability, including a learning disability, for which you request an accommodation, please contact the Disability Services office in UC 3150, or call (903) 566-7079.

### **Student Absence due to Religious Observance**

Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

### **Student Absence for University-Sponsored Events and Activities**

If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

### **Social Security and FERPA Statement:**

It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

### **Emergency Exits and Evacuation:**

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

### **14. Technical Information**

If you experience technical problems or have a technical question about this course, you can obtain assistance by emailing [itsupport@patriots.uttyler.edu](mailto:itsupport@patriots.uttyler.edu) or call 903.565.5555.

When you email IT Support, be sure to include a complete description of your question or problem including:

- ☐ The title and number of the course
- ☐ The page in question
- ☐ If you get an error message, a description and message number
- ☐ What you were doing at the time you got the error message

You may also visit the Help Tab in Blackboard for useful information or check out **On Demand Learning Center for Students** <http://ondemand.blackboard.com/students.htm>

### **Plug-ins and Helper Applications**

UT Tyler online courses use Java, JavaScript, browser plug-ins, helper application and cookies. It is essential that you have these elements installed and enabled in your web browser for optimal viewing of the content and functions of your online course. Always ensure that you are using the most update version for the browser you choose to access the online learning content.

**NOTE: Mozilla Firefox** is the recommended browser for Blackboard. (URL: <http://www.mozilla.org/en-US/firefox/new/>)

☐ **Adobe Reader** allows you to view, save, and print Portable Document Format (PDF) files. (URL: <http://get.adobe.com/reader/>)

☐ **Java Runtime Environment (JRE)** allows you to use interactive tools on the web. (URL: <http://www.java.com/en/download/>)

☐ **Adobe Flash Player** allows you to view content created with Flash such as interactive web applications and animations. (URL: <http://get.adobe.com/flashplayer/>)

☐ **QuickTime** allows users to play back audio and video files. (URL: <http://www.apple.com/quicktime/download/>)

☐ **Windows Media Player** allows you to view, listen and download streaming video and audio. (URL: <http://windows.microsoft.com/en-US/windows/products/windows-media-player>)

☐ **RealPlayer** allows you to view and listen to streaming video and audio. (URL: <http://www.real.com/>)

### **15. Netiquette Guide**

"Netiquette" is network etiquette, the do's and don'ts of online communication. Netiquette covers both common courtesy online and informal "rules of the road" of cyberspace.

### **16. Help/Support IT**

#### **Where to Get Technology Help**

**Phone:** (903) 565-5555 or extension 555 on campus

**Email:** [itsupport@uttyler.edu](mailto:itsupport@uttyler.edu)

### **17. Communication with Instructor**

The best way to get in touch with the instructor is through email [gabel@uttyler.edu](mailto:gabel@uttyler.edu). Please allow 24 hours response to your email during the week. If you have a question during the weekend, it may take up to 48 hours, but the instructor will do everything to answer questions immediately.

Dr. Gilbert Abel



Dates	Modules	Topic	Chapter	Assignments	Teams	Planswift
<b>January</b>						
14	In-Class	Introduction	1	Activate Planswift		
16	Module 1-	Chapter 1 - What is estimating	1	Assignment 1 - Ch 1	Create teams	
18			1		HW-1 - Estimate Forms Practice	
21	no class	no class				
23	Module 2-	Scoping and the specifications	2	Assignment 2 specifications	HW-2 - Create a proposal and estimate form	
25			2			
28	Module 3	Measuring Quantities Generally	3	Assignment 3- Scope sheet		
30		Introduce RS Means	3		HW-3 - Review RSM	
<b>February</b>						
1			3			
4	Module 4- Online	Pricing Subcontractors / The power of Productivity Rates	4	Assignment #4-Bid scoping	HW-4 - Productivity rates (example)	
6			4			
8			4			
11	Module 5	Earthwork / Apply the productivity rates to RS means	5	Assignment 5-RS Means Demo	HW-5 - Sub bid due-earthwork/ cut fill	
13			5			
15	Exam	EXAM 1				
18	Module 6	Concrete / City Cost Index	6	Assignment 6- Productivity Rates- labor	HW 6 - Sub bid due-concrete	
20		Price material using productivity rates/ RS means	6			
22			6			
25	Module 7	Masonry	7	Assignment 7- Productivity Rates- material	HW-7- Sub bid due-masonry	
27		Price labor using productivity rates/ RS means	7			
<b>March</b>						
1			7			
4	Module 8-	Steel	8	Assignment 8- Paycheck	HW-8- Sub bid due-metals	
6		Labor cont. Gross vs net. / Payroll breakdown	8			
8			8			
13 - 19	No Class	Spring Break				
18	Module 9 -	Measuring Carpentry and Miscellaneous Items	9	Assignment 9- workers comp	HW-9- Sub bid due-framing	
20		Overhead / Income / Expenses	9		modify form	
22			9			
25	Module 10	Drywall	10		HW-10- Sub bid due-drywall	
27	Exam	EXAM 2	10	Final Project-Begin		
29	Module 11	General Conditions	11	Assignment 10- Find pricing for Gen Con. Items		
<b>April</b>						
1	Module 12	Finishes	12		HW-11- Sub bid due-finishes	
3			12			
5	Module 13	In Class - Plan Swift tutorial 1 - Basics	13			
8		In Class - Plan Swift tutorial 2 - Parts	13			
10		In Class - Plan Swift tutorial 3 - Assemblies	13			
12		In Class - Plan Swift tutorial 4	13			
15		In Class - Plan Swift tutorial 5 - Reports	13			
17						
19						
22	In-Class	Senior Day/Presentations and Contractor/Student Mixer				
24						
26	In-Class	Final Presentation		Final Project Due		
<b>Apr 29 - 5</b>						
	No Exam	No Exam				

**Attachment 2**

**CMGT 3312 Course Objectives**

1. Develop conceptual and preliminary estimates
2. Develop an estimate using elemental analysis
3. Calculate labor and equipment costs.
4. Develop unit prices for units of work.
5. Calculate a unit price bid.
6. Calculate a lump sum bid.
7. Apply project quantity takeoff using computerized software with PlanSwift.

### Attachment 3

#### Semester Project Overview

#### Taco Bell Nacogdoches, TX Team Project Worth 600 Points

#### Taco Bell Nacogdoches Description:

Estimation of a new Taco Bell restaurant in Texas. The purpose of this assignment is to practice your Estimator professionalism. Usually, in large corporations, a junior estimator might preform the takeoff and a senior estimator will completely finish the operation. The senior estimator's job will be to check the quantity takeoff, then use what they need to provide pricing for each trade and for the final estimate.

In this task, you are the Senior Estimator. You will receive a blind takeoff binder that will be chosen randomly, with one thing in mind. You need a final estimate by the due date. Your job is to provide, to your company, an estimate for the Taco Bell project by April 26, 2019, as a team.

#### Objective:

- Provide a subcontractor estimate per trade.
- Provide a sub-bid proposal per trade.
- Provide a total, complete price estimate for the project. Expect the final total to be between \$275K and \$400K.

#### Administrative:

I will provide "check prices" per SF per trade or per line item.

You are expected to provide a useful, purposeful bid, per each trade, as if you are doing the work, in house as a subcontractor. For example, if hired tomorrow to do that trade, do you know the following:

- How much material do I need to purchase?
- What do I need to purchase?
- How long will my part take to preform?
- How many labor hours will be needed?
- How many men will be needed?

Note: If you cannot answer these, you are not considered a competent subcontractor.

Note: You can copy details directly from the total estimate form. Be sure that it is enough to do what is expected.

Note: The final, complete estimate is meant to be vague as most prices shown will be priced per lump sum (LS), square foot (SF), each (EA), linear foot (LF), or cubic yard (CY). This is normal. If the PM wants details, they will look in to the division tabs.

1. Secure your binder.
2. Divide up your divisions.

3. Secure the check prices for productivity rates and prices per unit.

**Teams.**

Divide the trade divisions between the team. There will be 9 teams. You will utilize the binder information from the last course.

**Deliverables: 600 points**

**I. Organize Binder (Worth 100 Points)**

Reorganize the binder and remove any plastic sleeves that might prevent a PM from being able to flip through the binder

**II. Subcontractor bid (Worth 100 Points)**

Provide (one) subcontractor estimate per division or trade. The details of this estimate were provided above.

PlanSwift is an on-screen digitizing and takeoff system that is suitable for both commercial and residential general contractors and subcontractors in a number of industries. The class will work through the provided tutorials to learn the software and then apply the tutorials to the semester project. Using Planswift the final is optional. You also have the option to use excel.

**III. Subcontractor proposal form (Worth 100Points)**

Provide (one) subcontractor proposal per trade division. A one sheet proposal will be fine as long as the total price and scope is on it.

**IV. Final Estimate. (Worth 100 Points)**

Provide (one) complete final estimate form completely filled out with a total for your project. Note: leave the old takeoff copy in the binder. As a professional, you will not delete any information that was forwarded to you. You will store it and keep it organized in case there is an error.

**Phase V. Final Submission Presentation (Worth 100 Points) – April 26, 2019**

In a 11 minute presentation, each team will present their projects to the class and provide their total estimate for the project.

- 3 min – Discuss the team name, group member, duties, and a little about the project.
- 3 min – Discuss one division in detail as if you are going to perform the task in house. How many laborers will you need, duration, materials, and cost for that task. Please go into detail.
- 3 min- What item's price was the most challenging?
- 3 min – What is the total for your project? How long will it take to complete your project?

**Professional Grade: Full Credit (200 points)**

This assignment has been implemented to help improve CM student's abilities, knowledge, and experiences here at UT Tyler. We intend to enrich your CM experience by introducing you socially to the local CM environment and by getting you exposed to the world, the players, and its challenges.

**Attendance Verification: 100 points**

- Attend all Scheduled class meetings
- Receive 100 points

**Participation points: 100 points**

- Join a CM group here at UT tyler; ie CMSA, DBIA, The CM Newsletter, etc.
- Prove attendance and participation in meetings.
- Receive 100 points
- *Note: You can receive extra credit points: 10 points - if you participate in a fundraiser or function that the CM group is providing. (IE: cooking hot dogs, setting up tables, etc.)*