Assessment Record

Program: Construction and Building Science Technology **Assessment period:** 2019 - 2020

Program or Department Mission:
The general mission of the construction program, as contained in the Mission of the College, is to offer programs and activities that reflect those characteristics that help define an educated person. These characteristics include a level of general education that enables the individual to understand his or her culture and environment; the development of skills in analysis, communication, quantification, and synthesis necessary for further growth as a lifelong member of society; the identification of a system of personal values based on accepted ethics that lead to civic and social responsibility; and the attainment of skills that enhance the development of leisure activities and a healthful lifestyle. These characteristics are attained not only through organized courses and programs, but also through a variety of social, cultural, civic and other educational activities that are offered based on the needs of the community.

Course Student Learning Outcomes & Assessment Plan 2019-2020

SLO 1: Be able to solve Construction management problems using mathematics, science, and problem-solving skills
SLO 2. Function effectively as a team member or as the leader of a team.
SLO 3. Possess an understanding of professional and ethical responsibilities present in construction management
SLO 4. Be able to communicate effectively using written and verbal assignments
SLO 5. Be able to plan, direct and coordinate construction projects

Intended Outcomes	Means of Assessment	Criteria for Success	Summary & Analysis of Assessment Evidence	Use of Results
SLO 1: Be able to solve Construction management problems using mathematics, science, and problem-solving skills	**CMT 205S** **Const. Management** **CMT 206S** **Const. Estimating** Students are given periodic tests and projects to evaluate their abilities in Construction Estimating. Instructor scores Students' **with a rubric from** 1 to 4.	***Successful outcome: 70% of Construction and Building Science Students complete this SLO with 70% or better*** Class outcome averages less than 3 will trigger changes in the course content or instruction prior to the next semester.	**CMT 205S:** **Total of number of students enrolled: 11** 8 out of 11 students completed the requirements in column 2. The average of the 8 successful students is 86.81%. ***72.73% of students completed this SLO with 70% outcome.*** The course student learning outcomes was greater than 3 covering these **SLOs**. Total number of students scoring 3 or better (column 3) = 9 (82%) **Class average: 3.27** **CMT 206S:** **Total of number of students enrolled: 12** 10 out of 12 students completed the requirements in column 2. The average of the 10 successful students is 82.80%. ***83.33% of students completed this SLO with 70% outcome.*** The course student learning outcomes was greater than 3 covering these **SLOs**. Total number of students scoring 3 or better (column 3) = 11 (92%) ***Class average: 3.70***	Objectives for **SLO 1** was met through **CMT 205S** and **CMT 206S**. Students in **CMT 205S** did very well. Although Some of the students passed this course with lower grades, they still were able to performed the requirements for the courses. Additional class projects will be assigned for students to have a better understand of various Construction Management topics. Students in **CMT 206S** did exceptionally well. Although Some of the students passed these courses with lower grades, they still were able to performed the requirements for the courses. Added class work will be assigned for students to work on Excel Software Program. Hence, the students will be able to calculate the cost of a project more accurately.

SLO 2. Function effectively as a team member or as the leader of a team.	**CMT 101S** **Construction Materials and Methods** Students must perform as a team member in the semester project. **CDT 205** **Fundamental of Surveying**. periodic field projects are performed by students in order to show their abilities to work as a team member and/or leader in a team. Instructor scores Students' **SLOs** from 1 to 4.	***Successful outcome: 70% of Construction and Building Science Students complete this SLO with 70% or better.*** Class outcome averages less than 3 will trigger changes in the course content prior to the next semester.	**CMT 101S:** **Total of number of students enrolled: 19** 16 out of 19 students successfully completed the requirements in column 2. The average of the 16 successful students is 85.56%. ***84.21% of students completed this SLO with 70% outcome.*** The course student learning outcomes was greater than 3 covering these **SLOs**. Total number of students scoring 3 or better (column 3) **Class average: 3.50** **CDT 205:** **Total of number of students enrolled: 15** 12 out of 15 students completed the requirements in column 2. The average of the 12 successful students is 83.23%. ***80% of students completed this SLO with 70% outcome.*** The course student learning outcomes was greater than 3 covering these **SLOs**. Total number of students scoring 3 or better (column 3) ***Class average: 3.60***	Objectives for **SLO 2** was met through **CMT 101S** and **CDT 205.** Students in **CMT 101S** did remarkably well. Although Some of the students passed this course with lower grades, they still were able to performed the requirements for the courses. Additional PowerPoint presentation will be given so students have a much better understanding of construction material topics and the importance of team work in construction industry. Students in **CDT 205** did extremely well. Although Some of the students passed these courses with lower grades, they still were able to performed the requirements for the courses. More Field Project will be assigned as supplementary work for students to work more accurately in the field with their teammates.

SLO 3. Possess an understanding of professional and ethical responsibilities present in construction management	**CMT 156** **Contracting and Const. Law** periodic projects and exams are performed by students in order to show their abilities to understand and work in an Ethical Construction environment. Instructor scores Students' **SLOs** from 1 to 4.	***Successful outcome: 70% of Construction and Building Science Students complete this SLO with 70% or better.*** Class outcome averages less than 3 will trigger changes in the course content prior to the next semester.	**CMT 156:** **Total of number of students enrolled: 14** 12 out of 14 students successfully completed the requirements in column 2. The average of the 12 successful students is 84.20%. ***85.71% of students completed this SLO with 70% outcome or better.*** The course student learning outcomes was greater than 3 covering these **SLOs**. Total number of students scoring 3 or better (column 3) **Class average: 3.40**	Objectives for **SLO 3** was met through **CMT 156.** Students in **CMT 156** did outstanding. Although Some of the students passed this course with lower grades, they still were able to performed the requirements for the courses. Opportunities will be granted for students in other construction course subjects to discuss Ethics in Construction Industry.

SLO 4. Be able to communicate effectively using written and verbal assignments	**CMT 161** **Introduction to Sustainable Construction** Term project is assigned that requires the students to turn in a written research project and to present it in front of the class. Instructor scores Students' **SLOs** from 1 to 4.	***Successful outcome: 70% of Construction and Building Science Students complete this SLO with 70% or better.*** Class outcome averages less than 3 will trigger changes in the course content prior to the next semester.	**CMT 161:** **Total of number of students enrolled: 17** 15 out of 17 students successfully completed the requirements in column 2. The average of the 12 successful students is 85.10%. ***88.24% of students completed this SLO with 70% outcome or better.*** The course student learning outcomes was greater than 3 covering these **SLOs**. Total number of students scoring 3 or better (column 3) **Class average: 3.55**	Objectives for **SLO 4** was met through **CMT 161.** Students in **CMT 161** did an outstanding performance. Although very few students passed this course with lower grades, they still were able to performed the requirements for the courses. More necessities such as PowerPoint presentations will be required from all students. Also, additional time will be assigned to students' class presentations. Plans may also include inviting outside individuals as guests to sit on students' presentations.

SLO 5. Be able to plan, direct and coordinate construction projects	**CMT 217** **Software Applications in Construction** Various project and exams are given by the instructor periodically throughout the course. Instructor scores Students' **SLOs** from 1 to 4.	***Successful outcome: 70% of Construction and Building Science Students complete this SLO with 70% or better.*** Class outcome averages less than 3 will trigger changes in the course content prior to the next semester.	**CMT 217:** **Total of number of students enrolled: 14** 14 out of 14 students successfully completed the requirements in column 2. The average of the 14 successful students is 82.50%. ***100% of students completed this SLO with 70% outcome or better.*** The course student learning outcomes was greater than 3 covering these **SLOs**. Total number of students scoring 3 or better (column 3) **Class average: 3.42**	Objectives for **SLO 5** was met through **CMT 217.** Students in **CMT 217** had an exceptional outcome. 100% of students performed the requirements for the courses. Although students did well in this class, plans may include inviting guests from local construction companies to critic students class projects. Furthermore, let these individual guests to relate the students' Construction Scheduling Projects with actual construction project schedules.
Submission date: December 08, 2020			**Submitted by: Mike Safavi**	

SLO 1: Be able to solve construction management Problems using mathematics, science, and problem-solving Skills.

Return to SLO 1
Return to SLO 2
Return to SLO 3
Return to SLO 4
Return to SLO 5

CMT 205S Tests and Projects

Final Exam Spring 2020

Jefferson State Community College
Construction & Building Science
CMT 205S – Construction Management

Name: _____ *Instructor – Mike Safavi, AIC, CPC*

As a Contractor, you have a General Partnership structure with a total asset of $200,000. You have won the bid on a $161,000 project. You are in the need of a credit line from your local bank to pay for all the initial costs of the project. Your bank is requiring you to show the following:

1.. It is essential for your company to purchase a $95,000.00 ***used*** Backhoe for this project. The bank is requiring you to show the yearly depreciation for this equipment using Declining Balance for Five years. (20 pts.)

Year	Rate %	Book Value at the end of previous year ($)	Depreciation for this year ($)	Book Value at the end of this year ($)
1				
2				
3				
4				
5				

3. If you receive 35% of the total profit on projects, what is your profit share from the project in question #1? The project has a 20% profit. (10 pts.)

4. The owner requires you to submit certifications for Payment Bond and Bid Bond. Clearly explain why the owner requires these bond certifications from you. (20 pts.)

Payment Bond:

Bid Bond:

5. When your company wins a bid, when do you start your mobilization to that job site? (5 pts.)

Return to SLO 1
Return to SLO 2
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Return to SLO 4
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6. If your partners David has 25%, Susan has 15%, Peggy has 20%, and Thomas has 5% investment in the company; what is their profit shares from the project in question #1? The project has a 20% profit. (20 pts.):

David: _____.
Susan:_____.
Peggy:_____.
Thomas:_____.

7. The owner desires to modify a few parts of the project prior to Bid Opening Day; What types of documentation should he present to you? (5 pts.)

8. The partners have been discussing changing the Legal Structure of the company from a Partnership to a Corporation. As their advisor and major partner, clearly explain one major advantage and one major disadvantage for a Corporation Legal Structure. (10 pts.)

Major advantage:

Major disadvantage:

9. Your next project is a remodel of a small old manor. As a 110-year-old structure, no plans or drawing exist. The owners of this residence have heard lots of positive and helpful reviews about your company and its quality workmanship. They are ready to sign a contract with your company. What type of a contract are you willing to sign regarding this remodel project? Explain why? (10 pts.)

Type of Contract:

Explain:

Have a wonderful summer
It was an honor to be your instructor

CMT 205s
Construction Management
Final Project

All proposals must be type written and neatly presented in a folder.

You have graduated with a degree in Construction Management.

Congratulations!

***

Years down the road, as you love your field and working hard to succeed in your career. With your hard work, you are learning to be a great manager. After a few Real Estate transaction, you now have $320,000.00 cash in the bank. You are sure if you could have $1,000,000.00 in capital assets, you could use your work and managerial skills and establish a successful construction company. The industry is optimistic and you are competent in your abilities and goals. However, you need to present convincing answers to the following questions in order to promote your business idea to the interested parties:

1) You must have a name for your construction company.
2) What type of construction are you going to do (i.e. Single Family Residential, Multi-Family, Commercial, Industrial, etc.)?
3) What is the Business Plan for your company?
4) What cost range of projects will your company be performing?
5) Establish a Legal Structure for your company. Show the responsible key players and their hierarchy in your company.
6) List and explain all the solid advantages in choosing this specific legal structure versus other types.
7) Show tables, figures, salaries, or percentages which you recommend disbursing the monthly income of your company among the key player.
8) Your company requires equipment. List and describe what type of equipment you are going to purchase.
9) Since your company owns equipment; what method of depreciation are you going to use for these equipment. What are advantages for using this specific method vs. other methods?

ALL ABOVE QUESTIONS MUST BE SUPPORTED BY NUMBERS WHERE REQUIRED.

Return to SLO 1
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Final Project Objectives:

- Each student must complete this project individually.
- This project carries 30% of your total grade.
- Due date is restrictedly enforced. Late submission of this project is not acceptable.
- Graphics, tables, neatness, and overall presentation counts toward your grade.

This project is due at 6:30 on Monday, April 20, 2020. Students are required to present their individual projects for the entire class on Monday, April 20 and, Wednesday, April 22, 2020. Please be ready to present on these days. Instructor will call name for presentations.

Return to SLO 1
Return to SLO 2
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Return to SLO 4
Return to SLO 5

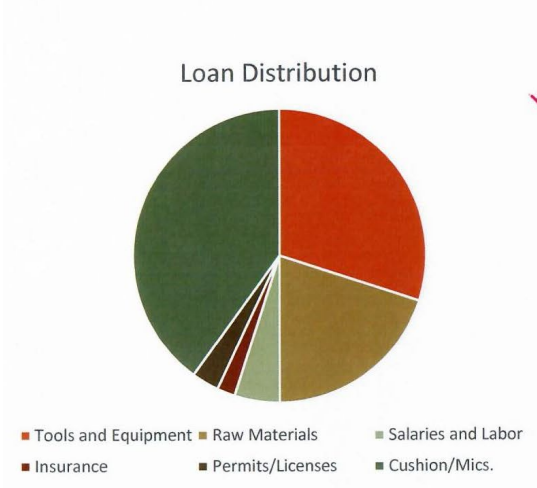
SLO 1 - CST 206 - Additional Excel Assignment

2022 Toyota Tundra - New
https://www.toyota.com/configurator/build/step/model/year/2022/series/tundra/model/8241/

2021 Mini Excavator – Used
https://fleetupmarketplace.com/Listing/mini-excavators-2021-xcmg-xe35u/209320

Year	Rate	Book Value at End Previous Year	Depreciation for this year	Book Value at End This Year	Year	Rate	Book Value at End Previous Year	Depreciation for this year	Book Value at End This Year
1	40%	$40755	$16302	$24453	1	30%	$46900	$14070	$32830
2	40%	$24453	$9781.20	$14671.80	2	30%	$32830	$9849	$22981
3	40%	$14671.80	$5868.72	$8803.08	3	30%	$22981	$6894.30	$16086.70
4	40%	$8803.08	$3521.23	$5281.85	4	30%	$16086.70	$4826.01	$11260.69
5	40%	$5281.85	$2112.74	$3169.11	5	30%	$11260.69	$3378.21	$7882.48

Financial Plan continued



- The $1,000,000 loan would be disbursed based on the pie chart to the left.
- The majority of funds would be used to purchase equipment, tools and raw materials.
- Leftover funds that are not directly disbursed will be used as a cushion while we build our client roster.
- Based on the profit projection in the last slide, if we can secure the needed jobs, we can repay this loan within 6 months of operating.

Financial Plan continued

Return to SLO 1
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Jefferson State Community College - CBST Department - Course Student Learning Outcomes (SLO)
Instructor Class Evaluation

CMT 205S - CONSTRUCTION MANAGEMENT

	Mike Safavi, AIC, CPC Instructor Name Spring 2020 Semester Course CRN Number Student Name	The student understands the construction management topics of project delivery methods, contract pricing, subcontracting, and material management.	The student understands the Bidding Process, submittals, project start-up, field questions, and progress payments.	The student understands the construction management topics of safety plans, change orders, and project delivary.	The student understands the different types of Legal Structure for a company. The studant is able to analyze the pros and cons for such legal structures.	The student understands equipment depreciation methods and is able to calculate equipment deprecaition.		Student Average	Final Grade (A,B,C,D,F)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
	Average class SLO	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	

Use this chart to complete the student learning outcome evaluation for each of your students.

1=low comprehension **4=high comprehension**

Please return this form to the Prgram Coordinator at the end of each semester

SLO 2. Function effectively as a team member or as the leader of a team.

CMT 101S Tests and Projects

Return to SLO 1
Return to SLO 2
Return to SLO 3
Return to SLO 4
Return to SLO 5

Fall | Construction and Building Science Technology | 2019

CMT 101s Semester Project

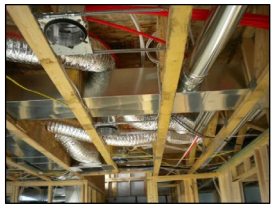
Instructor: Mike Safavi. AIC. CPC

All Team members MUST do equal work!

Team members: 1. _____ 2. _____ 3. _____

This is a project intended for students to show their ability to implement their learnt knowledge of this class. Following are the requirement for this project. Students who don't follow these requirements will be penalized:

1. Each Team must consist of two students.
2. Each team must get the instructor's approval regarding their intended project proposal prior to design and build of their project.
3. Projects must identify specific component(s) of building.
4. Each project must not occupy a space larger than 16" Wx16" Lx12" H space.



as Teams

All Models must be built to the scale required to fit in the space!

Each team must submit a proposal stating the objective of their project.

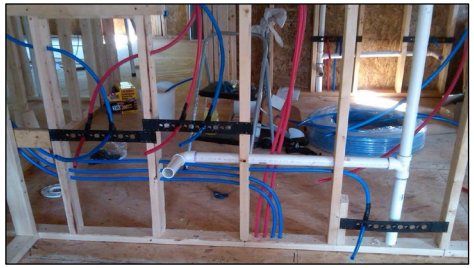
Proposals are due on Thursday, October 24, 2019 at 6:30 p.m.

Final Project is Due on Tuesday, December 10, 2019 at 6:30 p.m.

Each project will be evaluated based on the following five categories. Each category has a total of 20 points:

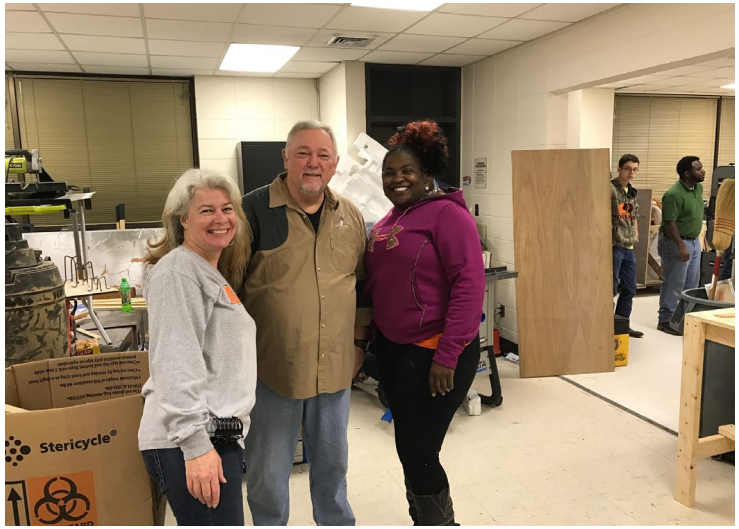
1. Defining the project subject.
2. True scale for the project.
3. Adequate members to define the project.
4. Presentation of material and methods of construction.
5. Overall construction workmanship.

Total pts. 100



Suggested Topics:

a. Heavy Timber Construction.
b. Brick veneer Construction.
c. Slab-on-grade Foundation.
d. Conventional Foundation.
e. Steel Frame Construction.
f. Concrete Frame Construction.
g. Stair Framing.
h. Stone Masonry
i. Advanced Framing
j. Rough - Ins



Students working in Wood Shop

Return to SLO 1
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SLO 2. Function effectively as a team member or as the leader of a team.

CDT 205 Tests and Projects

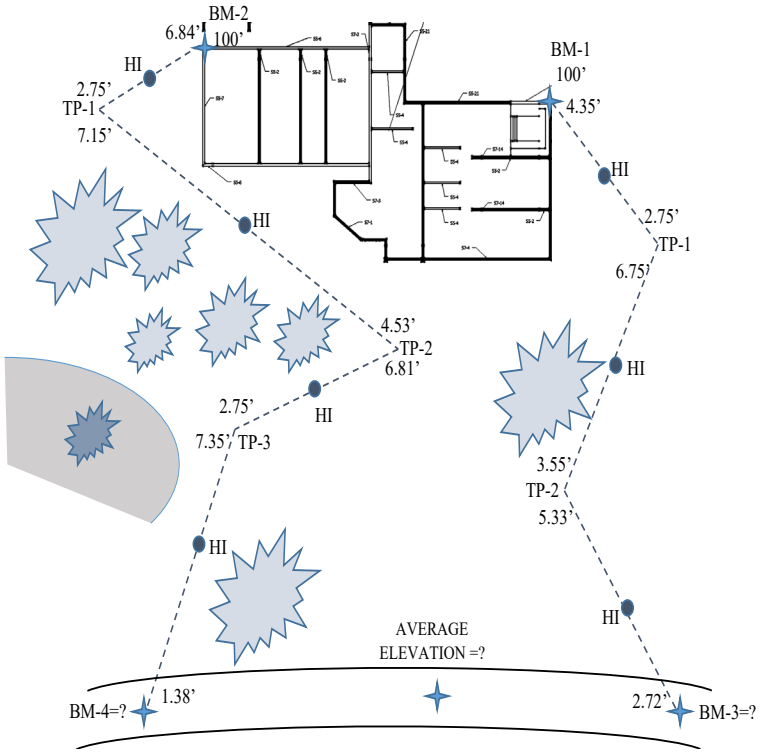
Building Layout Project (50 points)
CDT 205, Fundamental of Surveying
Instructor: Mike Safavi, AIC, CPC

Jefferson State Community College
Construction and Building Science
Technology Department

Class Project #1

Name: _____ ***Due Date: Monday July 15, 2019 @ 5:05 p.m.***

Using the Survey Points on this plat, find the Elevation at BM-3, BM-4, and the average elevation by completing the tables. (30 pts.)



Station	BS	HI	FS	Elevation
BM-1				100.00'

Station	BS	HI	FS	Elevation
BM-2				100.00'

Students working as Teams to Layout a Building

SLO 3. Possess an understanding of professional and ethical responsibilities present in Construction Management.

CMT 156 Tests and Projects

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[Return to SLO 4](#)
[Return to SLO 5](#)

Student Name: Aaron Sublett

$^{25}/_{25}$

CMT 156 ETHICS QUESTIONS AND SCENARIOS FOR DISCUSSION 02/18/2020

1. Near the end of the bidding process for the construction of a hotel, a project owner received a written inquiry from a prospective bidder regarding some missing information on the structural drawings. The owner consulted the structural engineer for the project to determine the requested information and provided the information to the prospective bidder. Not wishing to delay receipt of bids for the project, the project owner decided not to issue an addendum to the contract documents.

   ✔ a. Were the actions of the project owner ethical?

   Not from the perspective of the justice approach.

   ✔ b. How would you have handled this situation?

   I would have issued an addendum to make sure all bidders had the same information.

2. You are the estimator for Excel Mechanical Contractors and have received requests for quotation from five general contractors for the mechanical scope of work associated with the construction of a research facility. You evaluate the scope of work and your past experiences in working with each of the general contractors. You choose to submit different prices on each of the quotations provided to the general contractors. The reason for the different prices was your perceptions regarding how you would be treated by each of the general contractors.

   ✔ a. Was submitting different prices to each of the general contractors ethical? Why or why not?

   Yes. It is ethical because if one of the contractors made decisions that effected the cost of the work, Excel should charge them more to compensate for decisions that contractor might make again.

3. Continental Constructors received a contract for the construction of a hospital. During the bidding process, Continental received quotations for the mechanical scope of work from six subcontractors. Five of the quotations were solicited, and the sixth was unsolicited. Continental selected the lowest quotation from among the five solicited quotations, because they had had a previous unsatisfactory experience with the subcontractor who submitted the unsolicited quotation. However, the unsolicited quotation was the lowest price.

   ✔ a. Was it unethical for Continental Constructors to not select the lowest price quotation?

   No.

   ✔ b. What would you have done in this situation?

   I would have done the same.

Ethics Literature

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Return to SLO 3

Introduction

In this chapter, we will examine some of the ethical situations that one may encounter in the procurement of a construction contract or in the development of a bid or proposal for a construction project in response to a project owner's solicitation. Documents and bidding ethics is about the basic concepts and fundamental principles of decent business conduct on or before the submission of a bid or proposal.

Competitive bidding is one form of contract procurement that a project owner may use to select a general contractor for a construction project. In this process, a project is described in the bid documents, and prospective contractors are requested to submit bids or prices to construct the described project. Since price typically is the criterion used for award of bid contracts, the bidding process is seen as a "market driven" process in which the lowest bid represents the "best value."

During the bidding process, the project owner and project designer usually conduct a pre-bid meeting with prospective bidders and subcontractors to address any issues that they have identified as a consequence of reviewing the contract documents. At the conclusion of the pre-bid meeting, the project owner collects the issues identified by prospective bidders and subcontractors and provide responses to all prospective bidders in the form of a contract addendum. This use of contract addenda ensures that all prospective bidders are using the same project information when developing their bids and ensures fairness and equitable treatment of all prospective bidders during the bidding process.

Project owners may choose to select a general contractor for a project by requiring prospective general contractors to submit competitive bids or to submit proposals for a negotiated selection process. Competitive bids may be submitted on a lump-sum or unit-price basis or a combination of both. Negotiated proposals may use the same methods of pricing, or often may use a cost-plus approach in which most direct project costs are reimbursable and other contractor costs are included in the fee. Ethical issues can occur during both procurement processes as we will discuss in this chapter.

When developing bids or cost proposals to submit to project owners, the general contractors decide which scopes of work they will perform

with their own work forces and which scopes of work will be subcontracted to specialty contractors. The subcontracted scopes of work are organized into subcontract bid packages, and prospective subcontractors are invited to submit quotations for each subcontract bid package. The general contractors evaluate the subcontractor quotations and decide which ones to select as a part of their bid or proposal preparation process. Subcontracts are not awarded, however, until the general contractor receives the contract from the project owner.

There are many legal issues associated with the contract procurement process, such as the contractors meeting to discuss their bids and deciding which one would submit the lowest bid or contractors offering bribes to be selected. None of these legal issues are addressed in this chapter. We will restrict our discussion solely to ethical issues that may occur during the contract procurement process.

Introductory Case Study

A project manager for Acme Construction reviewed the construction drawings and specifications for the construction of a shopping center prior to attending a pre-bid job site tour. During the review, the project manager identified two errors in the elevations provided in the drawings. During the site visit, the project manager asked the project architect about the elevation errors and was provided the correct information. However, the project owner did not issue an addendum to all prospective bidders making the elevation corrections to the project drawings. Were the project owner's actions ethical?

The site work associated with the project was unit priced, because a portion of the site contained contaminated soil that needed to be removed and replaced, additional fill material needed to be imported, and a large asphalt parking lot constructed. In addition, major utilities were to be installed on the site. During the review of the contract drawings, Acme Construction's estimator determined that the quantity shown on the unit price bid sheet for asphalt pavement was considerably less than what would be required for completing the project. The estimator decided not to notify the project owner and to inflate the unit price for the asphalt bid item because of the anticipated overrun. Was the estimator's action ethical?

Quotations were solicited from six prospective electrical subcontractors for the project. The lowest quotation was submitted by Northern Lights Electrical Contractors, but the project manager preferred to work with West Coast Electric. The project manager contacted the owner of West Coast Electric and provided the quotation received from Northern Lights and told West Coast that they could have the job if they revised their quotation to a value less than that submitted by Northern Lights. Was the project manager's action ethical?

The shopping center structure was to be constructed of steel. Acme's estimator solicited quotations from three steel suppliers for the project. The estimator was concerned both about the cost of the steel and the ability of the suppliers to meet the required delivery dates established in the preliminary construction schedule. Continental Steel submitted the lowest quote but did not guarantee that they could meet the required delivery dates. The salesman for the steel supplier indicated to Acme's estimator that if Continental Steel received the supply contract they would host the estimator to a fishing trip. What should the estimator do in this? situation?

Ethical Challenges

Ethical Challenge: Errors in Project Documents

The bidding instructions given to prospective bidders on a project typically require that the bidder consider all conditions described in the contract documents and all conditions that can be observed by physically visiting the site. Liability for hidden conditions not described in the documents or in a soils report typically is the responsibility of the project owner. These would include buried utility lines not shown on the drawings or contaminated soil not described in the documents.

During a pre-bid conference on the job site, representatives of the project designer and the project owner are present to describe the project and collect inquiries from prospective general contractors and subcontractors regarding the contract documents. To ensure that everyone who participates in the bidding process has the same information, the project owner should collect all of the questions and issue a contract addendum

providing appropriate responses to each question. From the perspective of the justice approach, it is unethical to provide answers only to the party who asked the questions. Even though the issuance of a contract addendum late in the bidding process may necessitate delaying the receipts of bids, it is the ethical responsibility of the project owner to do so. It may also negate the need to issue a change order after the contract has been awarded.

Ethical Challenge: Bid Shopping

Bid shopping occurs when general contractors disclose to prospective subcontractors the price quotations received from competing subcontractors. The intent is to encourage subcontractors to lower their prices.

Again, based on the justice approach, this is considered unethical because it discloses information that is confidential, and not available equally to all bidders. A likely result is subcontractors refusing to work with general contractors who use this practice. The subcontractors are being asked to provide their best price for a specific scope of work, and they provide the price to the general contractor with the expectation that their price will not be shared among their competitors. Often subcontractors' quotations contain lists of specific inclusions and specific exclusions, which means that the scope of work addressed by each subcontractor may vary. This requires the general contractor to carefully evaluate each quotation and select the ones that provide the best value to the general contractor.

Another form of bid shopping that is unethical is when a general contractor uses the quotation of one subcontractor in their bid, but selects a different subcontractor to perform the work. For example, suppose Allied Construction Company is developing a bid for the construction of a high school and solicits quotations for the electrical work associated with the project. Capital Electric submits the lowest quotation for the electrical work, and their price is used by Allied in preparing their bid to submit to the project owner. Allied receives the contract for construction of the high school, but instead of awarding the subcontract for the electrical work to Capital Electric, they contact Southwest Electric and offer them the subcontract if they will do the work for less than the price submitted by Capital Electric. This sharing of Capital Electric's proposed price

with another subcontractor is considered a form of bid shopping and is unethical. It is also dishonest, and therefore violates the approach of virtue-based ethics.

Ethical Challenge: Receipt of Favors

Subcontractors may offer favors to general contractors in an effort to win a subcontract, and suppliers may offer favors to secure a contractor's business. Such practices may be unethical. Sometimes suppliers offer their good customers discounts for early payment of their invoices, and such practices are not considered unethical. However, a supplier offering a personal favor to the contractor's employees would be considered unethical. Whether or not a person's behavior is influenced by the receipt of a favor, there is a perception that such actions may occur. Anyone involved in making decisions related to award of contracts or subcontracts needs to ensure that a no-favor policy is adopted. This may include tickets to athletic events, fishing trips, meals, or other social events. It is best to not enter into a situation where there is a perception of favoritism or unfair advantage.

Applicable Standards

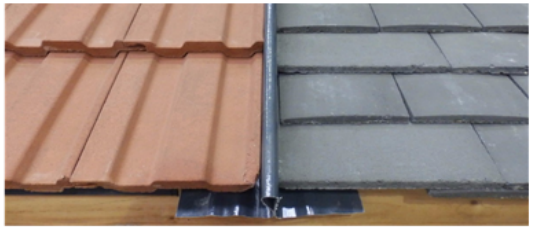
The applicable standards are to practice good faith and fair dealing in the solicitation of bids or proposals and in the preparation of bids or proposals for construction projects. Project owners and designers need to ensure that all prospective bidders have the same information relative to project scope and conditions. Any issues identified by the prospective bidders

SLO 4. Be able to communicate effectively using written and verbal assignments

FALL CMT 161 – INTRO. TO SUSTAINABLE CONSTRUCTION 2019

FINAL PROJECT

25% OF YOUR FINAL GRADE

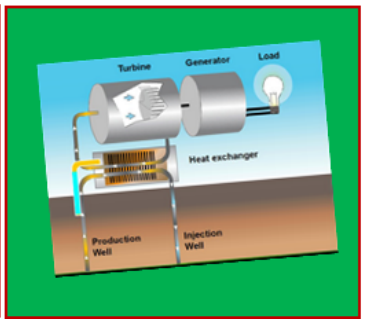


Requirements

1. Write a two-page report (three pages with work cited) about **any sustainable** building technology or idea.
2. Article should contain a works cited page and be accompanied with pictures, diagrams, graphs, product samples or models.
3. Use MLA format with Times New Roman font (12pt) and 1" page margins.
4. Please use the library and online resources provided by Jefferson State.
5. All reports and supporting material are due on ***Monday, November 18, 2019*** at the beginning of the class period.
6. All your projects will be posted on the walls of CBST's foyer to be viewed by students. So, make your project well presentable.

Sustainable Building Technology

Building a new structure is of course a challenge and to build a sustainable home is extremely challenging. There is good news in the construction industry today! We are now aware of the need for better building practices and this need is being fueled by consumer demand. The public is more aware of these modern technologies and their benefits. As energy prices and pollution continue to rise, the demand for cheaper more energy efficient housing will also increase. Builders who utilize and learn from the flows of nature will leave a positive mark on the earth for many generations to enjoy.



CMT 161 Tests and Projects

Return to SLO 1
Return to SLO 2
Return to SLO 3
Return to SLO 4
Return to SLO 5

CMT 161 Students presenting their research projects for the class

SLO 5. Be able to plan, direct and coordinate construction projects

Return to SLO 1
Return to SLO 2
Return to SLO 3
Return to SLO 4
Return to SLO 5

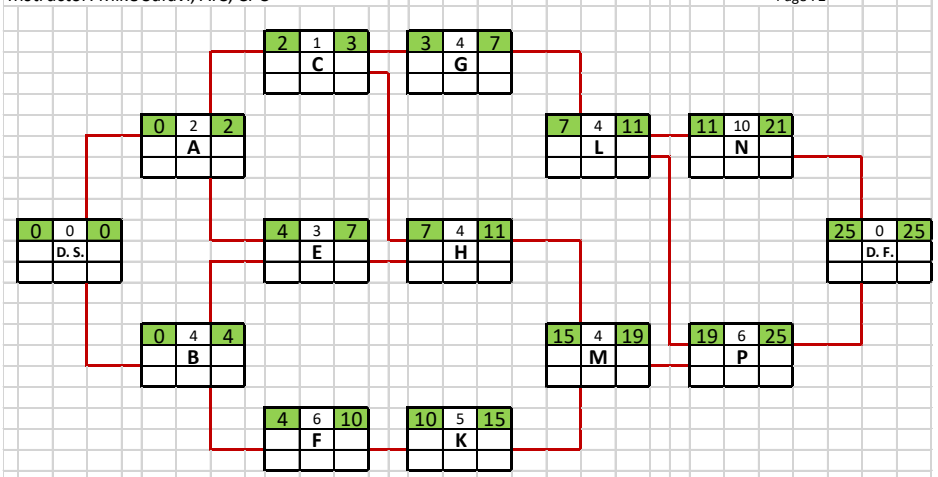
CMT 217 Tests and Projects

CMT 217 - Software Applications in Construction
FALL - 2019 Class project
Instructor: Mike Safavi, AIC, CPC
Page : 1

Requirement:
1. Complete Activity Table, showing D.U Activities and Time Durations of Activities on Page 1.
2. Complete Network Diagram on Page 2, showing Late Dates and Total Float of each Activity.
3. Complete Bar Chart Diagrams for Early and Late Dates Costs, showing representing Bars for each Activity and total cost per week on Page 3.

No.	Activity	D.U.	T	Cost/Day
1	A			$2,500.00
2	B			$3,000.00
3	C			$3,300.00
4	E			$6,200.00
5	F			$1,800.00
6	G			$6,800.00
7	H			$10,000.00
8	K			$5,000.00
9	L			$4,300.00
10	M			$3,800.00
11	N			$8,900.00
12	P			$3,000.00

CMT 217 - Software Applications in Construction
FALL - 2019 Class Project
Instructor: Mike Safavi, AIC, CPC
Page : 2



Network Diagram with Activity Time and Early Dates Calculations

Jefferson State Community College
Construction and Building Science Technology

CMT 217, Software Applications in Const.	*Instructor: Mike Safavi, AIC, CPC*

Class Project (50 pts.) Due Date: Monday, Dec. 2, 2019

The construction company, which you are working for, is working toward the bid package for the attached house. This house will be constructed to the Dry-In stage. Reaching this stage of construction will include:

1.	Rough-In Electrical	8 days
2.	Under slab Rough-In Plumbing	2 days
3.	Obtaining Building permit	3 days
4.	Rough-In HVAC	6 days
5.	Exterior walls insulation	2 days
6.	Site Excavation	2 days
7.	Footings and slab formwork	1 day
8.	Footing excavation	1 day
9.	Complete walls and roof Framing	30 days
10.	Building Layout	1 day
11.	Windows and exterior doors procurements	14 days
12.	Finish roofing	3 days
13.	Re-bar placement and concrete slab work	1 day
14.	Above slab rough-in plumbing	4 days
15.	Installing Windows and Exterior doors	2 days
16.	Material delivery	3 days

At Dry-In stage; this house will be protected against water leakage caused by rain and secured for any type of unwanted entrances.

You as the planner, are required to do the following:

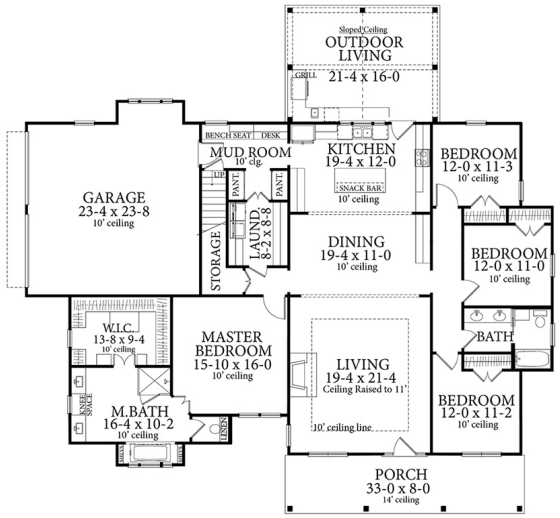
1. Using Excel format, establish a table showing all the required activities, their dependencies, and their time duration.

2. Using Microsoft Project 2013, enter all your activities, their dependencies, their time durations, and produce a schedule that reflects this project. Be sure to configure the software to provide Total Float for each activity and the total duration for this project.

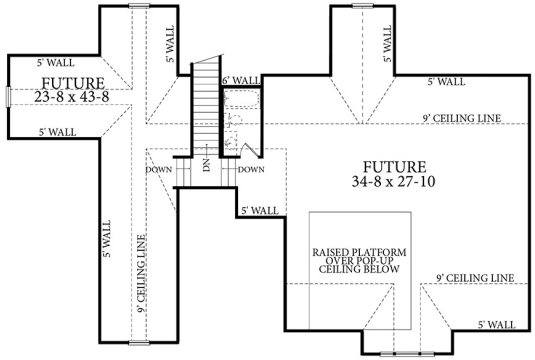
3. You are required to submit:
   a. Your printed table showing all the required activities, their dependencies, and their time durations.
   b. The print of the project schedule produced by Microsoft Project 2013; both as a Gantt Chart and a Precedence Diagram.

Front Elevation

Return to SLO 1
Return to SLO 2
Return to SLO 3
Return to SLO 4
Return to SLO 5



Main Floor Plan



2nd-Floor Plan