UNIT REPORT

Construction Management BS - Assessment Plan Summary

Construction Management BS

Demonstrate Construction Management Knowledge and Skills

Goal Description:

Students will demonstrate knowledge and skills relevant to Construction Management.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Development Of Students' Knowledge And Skill

Learning Objective Description:

Students will be able to demonstrate competency in key areas of Construction Management by successfully displaying skills in an Estimation Course. The Estimation Course serves as a capstone requirement with required skills in construction math, material pricing, bid tabulation, and project scheduling.

RELATED ITEM LEVEL 2

ETEC 4369 Cost Estimation- Knowledge and Skills

Indicator Description:

All students enrolled in the program must complete an estimation class, ETEC 4369. The course addresses key concepts and skills relevant to project cost estimation relative to the field of Construction Management. Students are expected to achieve a 2 or higher on a scale of 0-4, with 0=incompetent, 1=marginal competency, 2=proficient, 3=accomplished, 4=mastered. We expect 80% of the students evaluated will score a 2 or higher.

Criterion Description:

There is consensus among the ETEC faculty that at least 80% of the students will score 2 or higher on the assessment rubric.

Findings Description:

The Fall 2016 course, **ETEC 4369 – ABC Estimating Competition**, was used as a substitute for ETCM 4368 – Cost Estimating of Construction Materials. The course provided students with the opportunity to apply their estimating knowledge to a real-world project. The course had 17 students of which 9 students were construction management majors. From those 17 students, a random sample of 5 students was obtained. An evaluation was made based on their comprehensive final examination grading. The final exam had 4 sections to assess the students' knowledge: basic construction math, pricing, bid tabulation, and project scheduling.

Exam Section				Exam	
I	II	III	IV	Score	Grade
0.875	1.000	0.917	0.500	3.29	B
0.875	1.000	0.833	0.500	3.21	B
0.875	1.000	0.833	0.500	3.21	B
0.750	1.000	0.667	0.250	2.67	C

Section

I	Basic construction math
II	Pricing including material and work take-off
III	Bid tabulation
IV	Project schedule

An evaluation was made based on the Assessment Rubric for each of the students exams and their ranking is shown below.

Rubric objectives

A	B	C	D	E	F	
a	a	a	a	m	m	
a	a	a	a	m	m	
a	a	a	a	m	m	
a	a	a	a	m	m	
p	a	a	p	m	m	
Weighted Rubric Objectives						
0.1	**0.2**	**0.1**	**0.2**	**0.3**	**0.1**	
3	3	3	3	4	4	3.1
3	3	3	3	4	4	3.1
3	3	3	3	4	4	3.1
2	3	3	2	4	4	2.8

Rubric Counts

		A	B	C	D	E	F
m	Mastered					5	5
a	Accomplished	4	5	5	4		
p	Proficient	1			1		
g	Marginal						
i	incompetent						

Evaluation of the objective are as follows:

- Objective “A” had 4 students that were accomplished and 1 as proficient.
- Objective “B” had all 5 students that were accomplished or better.
- Objective “C” had all 5 students that were ranked accomplished.
- Objective “D” had all 1 student ranking as proficient with 4 students ranking as accomplished.
- Objective “E” had all 5 students ranking as mastered.
- Objective “F” had all 5 students ranking as mastered.

RELATED ITEM LEVEL 3

Development of Students' Knowledge and Skill

Action Description:

Four of the five randomly assessed students out of the 17 students enrolled in the ETEC 4369 (Estimating of Construction Materials) scored above 3.0 based on a series of assessment tools. The one student who didn't met the expected scored 2.8. It is expected that future students will achieve at a similar level of described criterion that 80% of students enrolled in the course will score a three or higher score based on the assessment rubric.

Develop Professional Skills

Goal Description:

Students will gain necessary work force experience to compete in the construction field.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Demonstrate Professional Skills

Learning Objective Description:

Students completing the BS in Construction Management will demonstrate skills necessary to compete in the professional marketplace through an internship.

RELATED ITEM LEVEL 2

ETEC 4391 Internship Evaluation

Indicator Description:

All students enrolled in the program must complete ETEC 4391 in their final year of enrollment. ETEC 4391 addresses key concepts and skills, as well as practical demonstrations of competency relevant to the field of construction management. Each semester interns will be evaluated by their internship supervisor and by their faculty supervisor on a faculty-developed rating scale.

Criterion Description:

It is expected that at least 85% of the students enrolled in ETEC 4391 will achieve above average standard (4 or higher) of performance on the supervisor rating scale.

Findings Description:

There were five students pursuing the BS in Engineering Technology enrolled in ETEC 4391 in Spring 2017, the semester of assessment. The students completed the assigned weekly reports with a score of 5 on a 5 points scale.

RELATED ITEM LEVEL 3

Development of Professional Skill

Action Description:

There were 5 student pursuing the BS in Engineering Technology enrolled in ETEC 4391 during this assessment circle, and earned a score of 5 on a 5 points scale. We will continue monitoring student performance on an annual basis and be diligent in continuous assessment of this learning objective to ensure that our students are prepared to meet the demands of a dynamic marketplace. We consider the current criterion description of 85% of students enrolled in the course scoring a 4 or higher appropriate, and will continue the effort to meet and exceed it.

Update to Previous Cycle's Plan for Continuous Improvement

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

We must be diligent in continuous assessment of the learning objective, "Development of Professional Skills" to ensure that our students are well prepared for the dynamic demands of the marketplace. We will continue to meet and exceed the standard description of 80% students scoring above average standard (four or higher).

The randomly assessed five of the 17 students enrolled in the ETEC 4369 (Cost Estimating of Construction Materials) met the criterion description based on a series of course assessment tools. It is expected that future students will achieve at a similar level. We will also discuss the appropriateness to increase the criterion description of 80% of students enrolled in this course from currently scoring two to a three or higher on the assessment rubric.

Update of Progress to the Previous Cycle's PCI:

We will continue to assess of the learning objective, "Development of Professional Skills" to ensure that our students are well prepared for the dynamic demands of the marketplace. We will continue to meet and exceed the standard description of 80% students scoring above average standard (four or higher).

Four of the five randomly assessed students out of the 17 students enrolled in the ETEC 4369 (Cost Estimating of Construction Materials) met the criterion description based on a series of course assessment tools with one student scored 2.8. It is expected that future students will achieve at a similar level. We also plan to discuss the appropriateness with the advisory committee to maintain the criterion description of 80% of students enrolled in this course scoring a three or higher on the assessment rubric.

To actively monitor the demands of the market, we plan to outreach and seek feedback from alumni, current and potential future employers. As a first attempt, we will start the process of forming an industrial advisory committee and organizing the first advisory committee meeting in the coming academic year. This effort also prepares the program for the ABET accreditation in the long term.

With the addition of two tenure track faculty, we plan to revisit the current curriculum and check for the prerequisites, course description, and course content. One major topic is to discuss the feasibility of introducing capstone design project as a required major course.

Monitoring market place, skills, and content knowledge

Closing Summary:

The Engineering Technology faculty started the process of curriculum mapping as well as development of flow chart and course offering rotation plan for the SHSU Construction Management program. One major topic is to develop a capstone design project course and incorporate it into the existing curriculum. To achieve this goal, name, prerequisites, course description, and content of all the courses in the current curriculum will be visited and adjustment is necessary to accommodate the additional course hours of the capstone design project course. We plan to solicit input from as many source as possible, particularly industry partner and alumni.

We will continue to assess the learning objectives of development and demonstration of professional skills to ensure that our students are well prepared for the dynamic demands of the marketplace. We will continue to meet and exceed the standard description of 80% students scoring above average standard (four or higher) for the internship course. We also plan to discuss the appropriateness with the advisory committee to maintain the criterion description of 80% of students enrolled in the cost estimating course scoring a three or higher on the assessment rubric.