ACCE Program Student Learning Outcomes - Construction Management

Outcome

Accounting and Cost Control

1. Understand construction accounting and cost control

Action details:
Review the next semester results to see if the metrics have changed toward a positive direction. Review assessment related to the AIC Exam and Course Assessment.

Implementation Plan (timeline):
End of Fall 2015

Key/Responsible Personnel:
Chuck Berryman

Evaluation of Action:
Monitor to see if assessment scores are higher. If so, no further action is needed. If lower, adjustments will need to be made.

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Low

Risk Management

2. Understand construction risk management.

Action details:
Meets or exceeds targets.

Implementation Plan (timeline):

No Action Necessary

Status for No Action Necessary

Current Status:
Completed

Budget Status:
No Mapping

**Construction Law**

3. Understand the legal implications of contract, common, and regulatory law to manage a construction project.

Mapped to: No Mapping

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**Project Controls**

4. Understand construction project control processes

Mapped to: No Mapping
**Quality Control**

5. Understand construction quality assurance and control

**Maped to:**
No Mapping

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**Review Curriculum and SLO Mapping**

**Action details:**
The curriculum needs to be reviewed for related topics. Those with appropriate content then needs to be mapped to the SLO.

**Implementation Plan (timeline):**
Curriculum review to be completed by Fall 2014 along with SLO mapping.

**Key/Responsible Personnel:**
Undergraduate Program Coordinator

**Evaluation of Action:**
The frequency should be above 3 with less than 1.0 in the response ratio.

**Budget approval required? (describe):**

**Budget request amount:**
$0.00

**Priority:**
Medium

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**Project Delivery**

6. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process

**Maped to:**
No Mapping

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**No Action Necessary**

**Action details:**
Meets or exceeds targets

**Implementation Plan (timeline):**

**Key/Responsible Personnel:**

**Evaluation of Action:**

**Budget approval required? (describe):**

**Budget request amount:**
$0.00

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**Structures**

7. Understand the basic principles of structural behavior

Mapped to:
No Mapping

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**Evaluate Related Course Assessment Tools**

**Action details:**
The assessment tools used for the courses related to this SLO need to be evaluated to assure that they are appropriate for the higher level program assessment. The 2.69 ratio could indicate a discrepancy in the process.

**Implementation Plan (timeline):**
Review to be complete by the end of Fall 2014. Monitor next assessment cycle scheduled for Summer 2015

**Key/Responsible Personnel:**
Undergraduate Program Coordinator

**Evaluation of Action:**
The response ratio declines. Target to be less than 1.0

**Budget approval required? (describe):**

**Budget request amount:**
$0.00

**Priority:**
Medium

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**Monitor Progress**

**Action details:**
Review the next semester results to see if the metrics have changed toward a positive direction. Review assessment related to the AIC Exam and Course Assessment.

**Implementation Plan (timeline):**
End of Fall 2015

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Monitor to see if assessment scores are higher. If so, no further action is needed. If lower, adjustments will need to be made.
Add Topical Content

**Action details:**
Introduce or reinforce mechanical, electrical, and plumbing systems into other courses (i.e. CM 1011, 1102 and CM 4202)

**Implementation Plan (timeline):**
Begin implementation Fall 2014 and reassess SLO Spring 2015

**Key/Responsible Personnel:**
Faculty

**Evaluation of Action:**
Seeking to increase course outcome mapping frequency to the mechanical, electrical and plumbing systems Program SLO.

**Budget approval required? (describe):**
n/a

**Budget request amount:**
$0.00

**Priority:**
Low

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Mechanical, Electrical and Plumbing Systems

8. Understand the basic principles of mechanical, electrical and plumbing systems

**Mapped to:**
No Mapping

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Monitor Progress

**Action details:**
Review the next semester results to see if the metrics have changed toward a positive direction. Review assessment from the College of Architecture.

**Implementation Plan (timeline):**
End of Spring 2016

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Seeking to increase course outcome mapping frequency to the mechanical, electrical and plumbing systems Program SLO.
**Sustainable Construction**

9. Understand the basic principles of sustainable construction

- Mapped to: No Mapping

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**Review Curriculum and SLO Mapping**

- **Action details:**
  The curriculum needs to be reviewed for related topics. Those with appropriate content then needs to be mapped to the SLO.

- **Implementation Plan (timeline):**
  Curriculum review to be completed by Fall 2014 along with SLO mapping.

- **Key/Responsible Personnel:**
  Undergraduate Program Coordinator

- **Evaluation of Action:**
  The frequency should be above 5 with less than 1.0 in the response ratio.

- **Budget approval required? (describe):**
  
- **Budget request amount:**
  $0.00

- **Priority:**
  Medium

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**Team Building**

10. Apply construction management skills as an effective member of a multi-disciplinary team

- Mapped to: No Mapping

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**Review ACCE Standards**

- **Action details:**
  As ACCE Standards become more defined, this need to be closely monitored as it relates to "multi-disciplinary" teams. Training is needed to determine whether or not the CM curriculum is meeting the intent of this SLO.

- **Budget approval required? (describe):**
  
- **Budget request amount:**
  $0.00

- **Priority:**
  Medium

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Additional information:
Visit to ACCE complete. Information resulted the modification of the CM 4202 Enterprise. Targets are now being met.

Next Steps:
None.

Substantiating Evidence:

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Implementing Plan (timeline):

Key/Responsible Personnel:
Undergraduate Program Coordinator

Evaluation of Action:
Training complete; report to faculty on CM compliance to SLO standard.

Budget approval required? (describe):
Budget approval will be within the CM Department for travel to ACCE

Budget request amount:
$1,600.00

Priority:

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Surveying

11. Apply basic surveying techniques for construction layout and control

Mapped to:
No Mapping

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Reinforce Topic at Senior Level

Action details:
Provide a topical review to graduating senior prior to taking the Senior Exit Exam and the AIC Level I Exam. It is believed that students have learned the topic but it is so early in the curriculum that it is being forgotten by the time they graduate.

Implementation Plan (timeline):
A month before each exam provide a review within CM 4202

Key/Responsible Personnel:
Instructor

Evaluation of Action:
Response ration falls below 1.0

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Low

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Status
for Reinforce Topic at Senior Level

Current Status:
Completed

Budget Status:

Additional information:
Targets are being met due to this action.

Next Steps:
None.

Substantiating Evidence:
**Ethics**

12. Analyze professional decisions based on ethical principles

Mapped to:
No Mapping

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**Methods, Materials, and Equipment**

13. Analyze methods, materials, and equipment used to construct projects

Mapped to:
No Mapping

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**Construction Documents**

14. Analyze construction documents for planning and management of construction processes

Mapped to:
No Mapping
Construction Software

15. Apply appropriate state-of-the-art electronic-based technology to manage the construction process.

Mapped to:
No Mapping

Review Curriculum and SLO Mapping

Action details:
The curriculum needs to be reviewed for related topics. Those with appropriate content then needs to be mapped to the SLO.

Implementation Plan (timeline):
Curriculum review to be completed by Fall 2014 along with SLO mapping.

Key/Responsible Personnel:
Undergraduate Program Coordinator

Evaluation of Action:
The frequency should be above 5 with less than 1.0 in the response ratio.

Budget approval required? (describe):
Budget request amount:
$0.00

Priority:
Medium

Oral Communications

16. Create oral presentations appropriate to the construction discipline.

Mapped to:
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Monitor Progress

Action details:
Review the next semester results to see if the metrics have changed toward a positive direction. Review assessment related to the AIC Exam and Course Assessment.

Status
for Monitor Progress

Current Status:
In Progress

Budget Status:
**Integrate CxC into the Curriculum**

**Action details:**
Communication across the Curriculum (CxC) is available to the Department and needs to be explored for implementation into the CM curriculum. Faculty need to be trained and courses identified, and a plan in place to facilitate the integration.

**Implementation Plan (timeline):**
First faculty meeting for Fall 2014 begin the planning process. Identification of faculty, courses, and process to be complete by semester's end. Begin implementation of implementation plan beginning Spring 2015.

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Seeking to have implementation plan in place with courses and faculty CxC certified by the university.

**Budget approval required? (describe):**
n/a

**Budget request amount:**
$0.00

**Priority:**
Low

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**Written Communications**

17. Create written communications appropriate to the construction discipline.

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**Status**
for Integrate CxC into the Curriculum

**Current Status:**
Completed

**Budget Status:**
Meeting targets due to this action.

**Next Steps:**
None.

**Substantiating Evidence:**
Safety

18. Create a construction project safety plan

Mapped to:
No Mapping

No Action Necessary

Action details:
Meets or exceeds targets

Implementation Plan (timeline):

Key/Responsible Personnel:

Evaluation of Action:

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:

Monitor Progress

19. Create construction project cost estimates

Mapped to:
No Mapping

Monitor Progress

Action details:
Review the next semester results to see if the metrics have changed toward a positive direction. Review assessment related to the AIC Exam and Course Assessment.

Implementation Plan (timeline):
End of Fall 2015

Key/Responsible Personnel:
Chuck Berryman

Evaluation of Action:
Monitor to see if assessment scores are higher. If so, no further action is needed. If lower, adjustments will need to be made.

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Low

Review Related Curriculum,

Status
Delivery, and Mapping

Action details:
The curriculum and delivery needs to be reviewed for related topics SLO mapping need to be verified to appropriate course outcome.

Implementation Plan (timeline):
Review needs to be completed by Fall 2014 along with SLO mapping verification

Key/Responsible Personnel:
Undergraduate Program Coordinator

Evaluation of Action:
Action is successful if the response ratio is below 1.0

Budget approval required? (describe):
Budget request amount:
$0.00

Priority:
Medium

Monitor Progress

Action details:
Review the next semester results to see if the metrics have changed toward a positive direction. Review assessment related to the AIC Exam and Course Assessment.

Implementation Plan (timeline):
End of Fall 2015

Key/Responsible Personnel:
Chuck Berryman

Evaluation of Action:
Monitor to see if assessment scores are higher. If so, no further action is needed. If lower, adjustments will need to be made.

Budget approval required? (describe):
Budget request amount:
$0.00

Priority:
**Status Summary**

There were 23 actions identified during this cycle. Of these, 15 were completed and the remaining 8 are in progress.

**Summary of Next Steps**

The Department need to monitor at least 7 student earning outcomes in the Fall of 2015 into the Spring of 2016. These outcomes are either close to the targets or approaching. If found moving away, action is needed.

After several departmental meetings, several next programmatic steps were identified:

- Integrate CxC into the curriculum
- Integrate OSHA safety certificate into curriculum
- Review and align the upper level CM course (C5 initiative)
- Review and align the lower level CM courses (F5 initiative)