ACCE Program Student Learning Outcomes - Construction Management

Outcome

Accounting and Cost Control
1. Understand construction accounting and cost control

Continue to Monitor Progress

Action details:
There is positive improvement but not meeting all assessment targets. Continue to monitor Senior Exit and AIC exam to see if improvement continues.

Implementation Plan (timeline):
Spring 2017

Key/Responsible Personnel:
Undergraduate Coordinator

Evaluation of Action:
Action complete when targets are met.

Budget approval required? (describe):
no

Budget request amount:
$0.00

Priority:
Low

Supporting Attachments:

Monitor Progress (completed)

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 Continue to Monitor Progress
Current Status:
In Progress
Budget Status:

Additional information:

Next Steps:
Continue to monitor beginning with the Fall 2016 results

Substantiating Evidence:
**Risk Management**

2. Understand construction risk management.

**Monitor Progress**

**Action details:**
Monitor Senior Exit and AIC exam for improvement.

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when all targets are being met.

**Budget approval required? (describe):**
No

**Budget request amount:**
$0.00

**Priority:**
Low

**Supporting Attachments:**

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**Construction Law**

**Monitor Progress**

**Status**

for Monitor Progress

**Current Status:**
In Progress

**Budget Status:**

**Additional information:**

**Next Steps:**
Continue to monitor beginning with the Fall 2016 results

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

**Action details:**
Monitor Senior Exit and AIC exams for improvement. Also check course SLO assessment for process and accuracy.

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when targets are being met.

**Budget approval required?** no

**Budget request amount:**
$0.00

**Priority:**
Medium

**Supporting Attachments:**

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**Review Coursework - Align SLO Accordingly (completed)**

**Action details:**
Review related coursework with instructor then align SLO forms accordingly.

**Implementation Plan (timeline):**
To be completed by Fall 2015

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
If SLO frequency is greater than 3, then the action would be considered successful.

**Budget approval required?** no

**Budget request amount:**
$0.00

**Priority:**
High

**Supporting Attachments:**

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**Status**
for Review Coursework - Align SLO Accordingly (completed)

**Current Status:**
Completed

**Budget Status:**

**Additional information:**

**Next Steps:**
Continue to monitor beginning with the Fall 2016 results

**Substantiating Evidence:**
**Project Controls**

4. Understand construction project control processes

**Continue to Monitor Progress**

*Action details:*
Monitor Senior Exit and AIC exam for improvement. Course SLO forms and process need to be reviewed.

*Implementation Plan (timeline):*
Spring 2017

*Key/Responsible Personnel:*
Undergraduate Coordinator

*Evaluation of Action:*
Action complete when all targets are being met.

*Budget approval required? (describe):*
no

*Budget request amount:*
$0.00

*Priority:*
Low

*Supporting Attachments:*

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**Quality Control**

5. Understand construction quality assurance and control

**Monitor Progress**

*Action details:*
Monitor Senior Exit and AIC exams for improvement.

*Implementation Plan (timeline):*
Spring 2017

*Key/Responsible Personnel:*
Undergraduate Coordinator

*Evaluation of Action:*
Action complete when targets are being met.

*Budget approval required? (describe):*
no

*Budget request amount:*
$0.00

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*Status*
for Continue to Monitor Progress

*Current Status:*
In Progress

*Next Steps:*
Continue to monitor beginning with the Fall 2016 results

*Substantiating Evidence:*
### Project Delivery

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

- **Monitor Progress**
  - **Action details:** Monitor Senior Exit and AIC exams for improvement.
  - **Implementation Plan (timeline):** Spring 2017
  - **Key/Responsible Personnel:** Undergraduate Coordinator
  - **Evaluation of Action:** Action complete when targets are met.
  - **Budget approval required? (describe):** N/A
  - **Budget request amount:** $0.00
  - **Priority:** Medium
  - **Supporting Attachments:**

### Structures

7. Understand the basic principles of structural behavior

- **Continue to Monitor Progress**
  - **Action details:** Monitor Senior Exit and AIC exams for improvement.
  - **Implementation Plan (timeline):** Spring 2017
  - **Key/Responsible Personnel:** Undergraduate Coordinator
  - **Evaluation of Action:** Action complete when all targets are being met.
  - **Budget approval required? (describe):** N/A
**Monitor Progress (completed)**

**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.

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

**Budget request amount:**
$0.00

**Priority:**
Low

**Supporting Attachments:**

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**Continue to Monitor Progress**

**Action details:**
Monitor Senior Exit and AIC exams for improvement

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**

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**Mechanical, Electrical and Plumbing Systems**

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

9. Understand the basic principles of sustainable construction

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**Substantiating Evidence:**

**Monitor Progress (completed)**

**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:**
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

**Supporting Attachments:**

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**Increase course frequency**

**Action details:**
Review program for areas to include Sustainable Construction.

**Implementation Plan (timeline):**
Review in Fall 2016 and implement for Spring 2017 semester.

**Status**
for Increase course frequency

**Current Status:**
In Progress

**Budget Status:**

**Additional information:**
Team Building

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

Key/Responsible Personnel:
Undergraduate Coordinator

Evaluation of Action:
If target Performance Ratio less than 1.0, then action is complete

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Medium

Supporting Attachments:

Improve Performance Ratio

Action details:
Reinforce the interdisciplinary team aspect into CM 4202 and CM 4208. Modify CM 4202 to provide a direct measurement. Monitor performance and re-assess

Implementation Plan (timeline):
Reinforce SLO by Fall 2016; re-assess Spring 2017

Key/Responsible Personnel:
Undergraduate Coordinator

Evaluation of Action:
If target Performance Ratio less than 1.0, then action is complete

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Medium

Supporting Attachments:

Continue to Monitor Progress

Status

Surveying

Printed on: 11/13/2016 04:10:20 PM (EST)
11. Apply basic surveying techniques for construction layout and control

**Action details:**
Monitor Senior Exit and AIC exams for improvement.

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when ALL targets are being met.

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

**Budget request amount:**
$0.00

**Priority:**
Low

**Supporting Attachments:**

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**Ethics**

12. Analyze professional decisions based on ethical principles

**No Action Necessary**

**Action details:**
Meets targets

**Implementation Plan (timeline):**
End of Spring 2017

**Key/Responsible Personnel:**

**Evaluation of Action:**

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

**Budget request amount:**
$0.00

**Priority:**

**Supporting Attachments:**

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**Methods, Materials, and Equipment**

**Monitor Progress**

**Action details:**

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**Status**
for Continue to Monitor Progress

**Current Status:**
In Progress

**Budget Status:**

**Additional information:**

**Next Steps:**

**Substantiating Evidence:**

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

**Monitor Senior Exit and AIC exams for improvement**

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when ALL targets are being met.

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

**Budget request amount:**
$0.00

**Priority:**
Low

**Supporting Attachments:**

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**Construction Documents**

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

**Continue to Monitor Progress**

**Action details:**
Monitor results from AIC and Senior Exit Exam

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when ALL targets are being met.

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

**Budget request amount:**
$0.00

**Priority:**
Low

**Supporting Attachments:**

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**Monitor Progress (completed)**

**Status**
for Monitor Progress (completed)

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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

**Supporting Attachments:**

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**Construction Software**

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

**Current Status:**
Completed

**Budget Status:**

**Additional information:**
Reviewed SLO forms. Found error in the electronic process. Forms corrected. Improvement has been realized on the AIC and Senior Exit exam.

**Next Steps:**
Continue to monitor AIC and Senior Exit exam for improvements

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**Improve Performance Ratio and Course Frequency**

**Action details:**
Performance ratio moving away from target but acceptable; however, need to review courses that use construction software and then compare the course outcomes to the program outcomes to see if adjustments are needed or more electronic technology based utilization is needed. Modify CM 4202 to provide a direct measurement.

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when the target performance ratio is moving towards the Ideal target of 0.50.

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

**Budget request amount:**
Oral Communications

16. Create oral presentations appropriate to the construction discipline.

**Continue to Monitor Progress**

**Action details:**
There was performance ratio improvement over last cycle; however, need to continue to monitor as the CxC process is integrated into the curriculum. Modify CM 4202 to provide a direct measurement.

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when targets move toward the Ideal targets for performance and frequency.

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

**Budget request amount:**
$0.00

**Priority:**
Medium

**Supporting Attachments:**

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**Monitor Progress (completed)**

**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:**

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**Status**
for Continue to Monitor Progress

**Current Status:**
In Progress

**Budget Status:**

**Additional information:**

**Next Steps:**

**Substantiating Evidence:**
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

**Supporting Attachments:**

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**Written Communications**

17. Create written communications appropriate to the construction discipline.

**Monitor Progress**

**Action details:**
Communication across the Curriculum (CxC) has been integrated into the curriculum. Faculty are rained and courses identified, and a plan in place to facilitate the integration. There was performance ratio improvement over last cycle; however, need to continue to monitor as the CxC process is integrated into the curriculum. Modify CM 4202 to provide a direct measurement.

**Implementation Plan (timeline):**
Spring 2017

**Key/Responsible Personnel:**
Undergraduate Coordinator

**Evaluation of Action:**
Action complete when targets move toward the Ideal targets for performance and frequency.

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

**Budget request amount:**
$0.00

**Priority:**
Low

**Supporting Attachments:**
18. Create a construction project safety plan

Action details:
Monitor results from AIC and Senior Exit Exam. Modify CM 4202 to provide a direct measurement.

Implementation Plan (timeline):
Spring 2017

Key/Responsible Personnel:
Undergraduate Coordinator

Evaluation of Action:
Action complete when all targets are met.

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Low

Supporting Attachments:

Estimating

19. Create construction project cost estimates

Continue to Monitor Progress

Action details:
Improvement noted; however still need to monitor results from AIC and Senior Exit Exam. Modify CM 4202 to provide a direct measurement.

Implementation Plan (timeline):
Spring 2017

Key/Responsible Personnel:

Evaluation of Action:
Action complete when all targets are met.

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Low

Supporting Attachments:
Monitor Progress (completed)

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

Supporting Attachments:

Continue to Monitor Progress

Action details:
Improvement noted; however need to continue monitor results from AIC and Senior Exit Exam. Modify CM 4202 to provide a direct measurement.

Implementation Plan (timeline):
Spring 2017

Key/Responsible Personnel:
Undergraduate Coordinator

Evaluation of Action:
Action complete when all targets are being met.

Budget approval required? (describe):

Budget request amount:
$0.00

Priority:
Low

Supporting Attachments:

Scheduling

20. Create construction project schedules
**Monitor Progress (completed)**

**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

**Substantiating Evidence:**

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**Status Summary**

There were 28 actions identified during this cycle. Of these, 9 were completed and the remaining 19 are in progress.

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**Summary of Next Steps**

Overall, student outcome learning results are moving toward the desired targets. The Department need to monitor most all SLO as the AIC and the Senior Exit Exam targets have yet to be met. If found moving away in the next assessment cycle, further action will be necessary.

Several next programmatic steps were completed:
- Integrate CxC into the curriculum
- Integrate OSHA safety certificate into curriculum
- Review and align the upper level CM course (C5 initiative)

One is still in progress:
- Review and align the lower level CM courses (F5 initiative)

There are three new steps and are to be completed no later than the Spring of 2017:
- Design and develop a mastery exam for graduating seniors using Moodle. This is a practice exam for the Senior Exit Exam
and for the AIC AC Level I Exam.

- Transition the Senior Exit Survey from Survey Monkey to LSU Career Services. This consolidation provides less work for staff/faculty and lets an outside entity verify the results. It also ensures the survey is completed every semester.
- Modify the senior capstone course (CM 4202 Enterprise) to measure Program SLOs requiring application or creation. Several courses already do this, but it should be measured when they graduate. These areas include:

  Oral Presentation
  Writing Skills
  Applying Technology
  Writing Skills
  Estimating
  Project Scheduling
  Project Safety Plan
  Multidisciplinary Team