SCHOOL OF THE BUILT ENVIRONMENT

DEPARTMENT OF CONSTRUCTION MANAGEMENT

'Faculty - Course Self Evaluation' Assessment Report
Fall 2018

Dated: January 10, 2019

BOWLING GREEN STATE UNIVERSITY

Prepared By: Arsenio Rodrigues

ASSESSMENT PARTICULARS:

No. of Surveys Distributed:	Fourteen (14) Surveys
No. of Surveys Returned:	Thirteen (13) Surveys
No. of Courses Evaluated:	Twelve (12) Courses
List of Courses Evaluated:	CONS 2350 - Introduction to Construction CONS 2590 - Construction Document Reading CONS 3180 - Construction Surveying CONS 3350 - Construction Materials and Testing CONS 3360 - Structural Design CONS 3370 - Mechanical, Electrical, and Plumbing Systems in Buildings CONS 3590 - Estimating and Cost Control CONS 4110 - Construction Safety and Health Management CONS 4350 - Construction Methods and Practices CONS 4420 - Construction Scheduling CONS 4590 - Construction Estimating Computer Applications CONS 4700 - Construction Capstone
Assessment Criteria:	Overall level of preparation of students in the course against each of the ACCE student learning outcomes (SLO) listed by means of Likert Scale: - Very High (Assigned Score = 5.00) - High (Assigned Score =4.00) - Average (Assigned Score = 3.00) - Low (Assigned Score = 2.00) - Very Low (Assigned Score = 1.00)
ACCE SLO Reference:	See Appendix for SLO descriptions

CONS 2350 - Introduction to Construction
Instructors: Andre Ballard + Wil Roudebush

ACCE SLO	SLO 18
Rating	High
Score	4

Improvements/recommendations (self-reflection) for next offering of course:
- I would integrate the different project delivery systems and the impact each project delivery system has on building material and assemblies.
- On Canvas, supplement the lectures with video and audio recordings corresponding to the course text, due to the amount of valuable information in the course text (Fundamentals of Building Construction: Materials and Methods by Edward Allen and Joseph Iano).

CONS 2590 - Construction Document Reading
Instructor: Scott Gross

ACCE SLO	SLO 7
Rating	High
Score	4

Improvements/recommendations (self-reflection) for next offering of course:
- At this point, the ongoing changes have been sufficient for this SLO. I don't think any changes are necessary for next semester.

CONS 3180 - Construction Surveying
Instructor: Joseph Lavalette

ACCE SLO	SLO 11
Rating	High
Score	4

Improvements/recommendations (self-reflection) for next offering of course:
- Integrate electronic based equipment into the field portion of the course.
- Create more projects that employ Excel as a tool to solve layout related projects.

CONS 3350 - Construction Materials and Testing
Instructor: Robert Austin

ACCE SLO	SLO 15
Rating	Average
Score	3

Improvements/recommendations (self-reflection) for next offering of course:

- Given the availability of graduate assistants and equipment move toward more to field trips v. hands on laboratory assignments.
- Explore prospects for added Graduate Assistant/Teaching Assistant support.
- Revisit prospects for adding to laboratory equipment, particularly concrete testing.
- Student performance on a mid-term exam was improved from prior year's class. Lab report submission performance was unchanged. Seems to be some improvement may be realized in student efforts on term reports based on interim submissions. Offering this course with a single graduate assistant limited to 10-hours is extraordinarily challenging. Ideally, two graduate assistants during the lab is preferred for hands on instruction. Man-hours should also be allocated to guide student in the development of their lab reports and to assist with grading. The absence of concrete compression test machine significantly limits the extent practical labs. Labs are limited to soils testing and a steel coupon testing. A copy of a quoted for a reconditioned compression test machine from a credible vendor is attached. Earlier quotes had been provided for new equipment.

CONS 3360 - Structural Design
Instructor: Joseph Lavalette

ACCE SLO	**SLO 19**
Rating	High
Score	4

Improvements/recommendations (self-reflection) for next offering of course:
- Work with the Math and Physics instructors to better prepare the students' base knowledge in these prerequisite courses to allow for a seamless entry into the material in the Structures course.

CONS 3370 - Mechanical, Electrical, and Plumbing Systems in Buildings
Instructor: Andre Ballard

ACCE SLO	**SLO 20**
Rating	High
Score	4

Improvements/recommendations (self-reflection) for next offering of course:
- I would incorporate a basic MEP systems design problem of a small commercial or residential building into the course to aid the student in understanding the basics of MEP systems and the integration with other building assemblies for instance clash detection with structural or etc.

CONS 3590 - Estimating and Cost Control
Instructor: Scott Gross

ACCE SLO	**SLO 1**	**SLO 4**
Rating	Average	High
Score	3	4

Improvements/recommendations (self-reflection) for next offering of course:

- SLO 1: The students write a detailed scope of work letter to the owner. They are prepared to execute the assignment. It does demonstrate their ability to create written communications. There may be a different assignment in another class that may be more robust for this SLO. This assignment does meet the criteria though.
- SLO 4: The current assignment for the final project works well for this SLO. The students work on this project during lab time and assemble a detailed cost estimate. I am satisfied with the assignment and the results generated by the students.

CONS 4110 - Construction Safety and Health Management
Instructor: Mark Prenzlin

ACCE SLO	SLO 1	SLO 3
Rating	Average	High
Score	3	4

Improvements/recommendations (self-reflection) for next offering of course:
- I will continue to emphasize the importance of creating written communication that is well-organized and includes correct spelling, grammar, and punctuation.
- I will instruct students of the importance of proof-reading all of their written communications and making appropriate corrections before sending. This includes formal letters, emails, etc.

CONS 4350 - Construction Methods and Practices
Instructor: Robert Austin

ACCE SLO	SLO 8	SLO 13	SLO 14
Rating	Average	Average	Average
Score	3	3	3

Improvements/recommendations (self-reflection) for next offering of course:
- SLO 8 - Analyze methods, materials, and equipment used in construction processes.
  • Integrate discussion on the SLO with SLO 13 (below).
  • Allocate more time to this SLO, as needed.
- In the absence of a required course in construction equipment, this course is a reasonable source to offer an assessment. Instructions on this item are also included in CONS 3350, Construction Materials and Testing. Other courses also have the potential for more discussion on construction equipment.
  Increased enrollment in two elective course (CONS 4370, Construction Equipment or CONS 4470, Trenchless Technology) would lead to improved student performance. Increasing enrollment can be addressed as a curriculum change or in scheduling of other electives so that each of these is offered no less than every other academic year.
- SLO 13- Understand construction risk management.
  • Explore an integrated approach to this SLO and SLO 8 (above).
  • Allocate more time to this topic, as needed.
  • Urge that concepts of risk contingencies be introduced in other courses within the program. For example, the concept of bid contingencies as a function of risk be discussed in one of the estimating courses.
  SLO 14 - Understand construction accounting and cost control.
  • Build.
- SLO 14 - Understand construction accounting and cost control.

• Build on current approach of capturing within discussions on construction productivity.
• Allocate more time to this SLO, as needed.
• Urge that a stronger foundation be provided within other courses within the program.

- The assignment of this SLO to this course was done as a matter of expediency during the last ACCE accreditation visit. One of the two estimating courses – CONS 3950, Construction Estimating and Cost Control or CONS 4590, Construction Estimating Computer Applications would be a more appropriate source to assess this SLO.

CONS 4420 - Construction Scheduling
Instructor: Mohammad Ilbeigi

ACCE SLO	SLO 5	SLO 16
Rating	Very High	Very High
Score	5	5

CONS 4590 - Construction Estimating Computer Applications
Instructor: Mohammad Ilbeigi

ACCE SLO	SLO 10
Rating	Very High
Score	5

Improvements/recommendations (self-reflection) for next offering of course:

- Make sure that all software programs are available in the lab before starting the semester.

CONS 4700 - Construction Capstone
Instructor: Scott Gross

ACCE SLO	SLO 9
Rating	High
Score	4

Improvements/recommendations (self-reflection) for next offering of course:

- This class and this assignment works well for evaluating this SLO. The students work on the final project for a significant amount of time to demonstrate their construction management skills. In this assignment, the students take on the role of estimator, project manager, project executive, safety director and other roles. The question presented (with no answer) at ACCE conferences is whether this scenario constitutes a multidisciplinary team. In my opinion, along with many others at the conference, it does.

SUMMARY OF SCORE / AVERAGE PER ACCE SLO:

ACCE SLO	AVERAGE
1	3.0
3	4.0
4	4.0
5	5.0
7	4.0
8	3.0
9	4.0
10	5.0
11	4.0
13	3.0
14	3.0
15	3.0
16	5.0
18	4.0
19	4.0
20	4.0

APPENDIX:

ACCE - STUDENT LEARNING OUTCOMES

1. Create written communications appropriate to the construction discipline.
2. Create oral presentations appropriate to the construction discipline.
3. Create a construction project safety plan.
4. Create construction project cost estimates.
5. Create construction project schedules.
6. Analyze professional decisions based on ethical principles.
7. Analyze construction documents for planning and management of construction processes.
8. Analyze methods, materials, and equipment used in construction processes.
9. Apply construction management skills as a member of a multidisciplinary team.
10. Apply electronic-based technology to manage the construction process.
11. Apply basic surveying techniques for construction layout and control.
12. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
13. Understand construction risk management.
14. Understand construction accounting and cost control.
15. Understand construction quality assurance and control.
16. Understand construction project control processes.
17. Understand the legal implications of contract, common, and regulatory law to manage a construction project.
18. Understand the basic principles of sustainable construction.
19. Understand the basic principles of structural behavior.
20. Understand the basic principles of mechanical, electrical and piping systems.