

**NORTH CAROLINA AGRICULTURAL AND TECHNICAL  
STATE UNIVERSITY**

**Program Assessment and Improvement Report  
Department of Built Environment  
Bachelor of Science in Construction Management**

There are thirteen full-time tenure and non-tenure faculty that deliver 3 programs (and Certificate in OSH) in the Built Environment Department. Specifically, there are six (6) full-time tenure-track faculty and one (1) non-tenure teaching faculty that deliver the **BS in Construction Management program** along with the assistance of one (1) adjunct faculty each semester. Located in the College of Science and Technology, the Construction Management (CM) program follows university's guidelines for assessing educational programs.

## **1. Expected Program Outcomes for the Educational Program and Its Student Learning Outcomes**

### **a. Program Outcomes**

- (1) **Program Quality.** The BS degree program in Construction Management will achieve excellence and recognition for high quality in teaching and learning, including the achievement of national accreditation. (A&T Strategic Goals 2, 3, and 6)
- (2) **Program Productivity.** The BS degree program in Construction Management will meet or exceed the University's goals for research/creative productivity, enrollment, retention, degree completion, and placement of graduates in jobs or graduate education. (A&T Strategic Goal 6 and vision for making a significant difference in the lives of those we educate)
- (3) **Program Contributions to Community Engagement.** The BS degree program in Construction Management will contribute appropriately to intellectual climate and creative exchange, professionalism, civic engagement, inclusiveness, cultural awareness, and respect for diversity. (A&T Strategic Goals 1, 2, 4, and 5)

### **b. Student Learning Outcomes**

- (1) **Communication Skills.** Students completing the BS degree program in Construction Management will exhibit effective communication skills (written, oral, graphic and interpersonal) appropriate for professionals in this field of study at the bachelor's level.
- (2) **Critical Thinking Skills.** Students completing the BS degree program in Construction Management will effectively use quantitative and/or qualitative analytical problem-solving skills appropriate for professionals in this field of study at the bachelor's level.
- (3) **Disciplinary Expertise.** Students completing the BS degree program in Construction Management will demonstrate a level of discipline-specific expertise (knowledge, skills, and professionalism) appropriate for professionals in this field of study at the bachelor's level.

- (4) **Research/Creative Engagement.** Students completing the BS degree program in Construction Management will demonstrate ability to engage productively in the review and conduct of disciplinary research and creative professional activity appropriate for professionals in this field of study at the bachelor's level.

## 2. Analysis of Expected Program Outcomes Assessment

### a) Program Outcomes

The overall mission of Construction Management program at North Carolina Agricultural and Technical State University is to prepare men and women in the scientific, managerial, and supervisory areas required in Construction Management. The primary focus of the BS in CM is to prepare students academically to secure construction-related positions in the field. The program will prepare students to function as professionals and be able to adapt to the ever-changing world of construction management.

To achieve our mission, purpose and focus, the program has established program outcomes of quality, productivity and community engagement, which will be discussed below. The majority of these activities have been attained with the support of our seven full time faculty and one adjunct faculty, along with the departmental and college administrators.

The three program outcomes for the BS in Construction Management are summarized in Table 1, which shows the relationship between the outcomes, the assessment, the results, and the improvements made. A more detailed narrative follows the Table.

**Table 1: Program Outcomes, Assessments, and Improvements, 2017-2020**

Name of Program	Program Outcome	Method of Assessment	Results of Assessment	Use of Assessment Results for Improvement
<b>Construction Management</b>	<b>Program Quality.</b> The BS degree program in Construction Management will achieve excellence and recognition for high quality in teaching and learning, including the achievement of national accreditation. (A&T Strategic Goals 2, 3, and 6)	This outcome will be measured by the attainment of either ACCE or ABET accreditation. Achievement in teaching excellence will be measured based on faculty's teaching effectiveness	The CM program achieved ABET and ACCE accreditation in 2018 and 2020, respectively. In addition, the program was also granted ATMAE accreditation in 2016. Evaluation of faculty teaching was highly favorable.	The faculty continued to strengthen the CM curriculum based on industry needs. Suggestions and recommendations from the accreditation visiting team, along with CM advisory board input were used for continuous

		using student and peer evaluations.		improvement practices.
	<b>Program Productivity.</b> The BS degree program in Construction Management will meet or exceed the University's goals for research/creative productivity, enrollment, retention, degree completion, and placement of graduates in jobs or graduate education. (A&T Strategic Goal 6 and vision for making a significant difference in the lives of those we educate)	The assessment measure will be based on faculty research productivity, grant proposals submitted, and funded grants received, scholarly publications and conference presentations. Data for enrollment, degree completion and job placement will be analyzed	There was evidence of substantial faculty research productivity, including scholarly publications and presentations, submitted proposals and funded grants. There was slight increase in enrollment and graduates were placed in various job positions within 6 months of graduation. Enrollment & retention data is available for verification.	Faculty were encouraged to increase their scholarly productivity through funded and other scholarly research, publications and presentations. Also plans were made to increase student recruitment activities in order to increase the enrollment. Efforts were made to reach out to employers to attend career fairs for job recruitment. Better advising strategies were developed to increase retention rates.
	<b>Program Contributions to Community Engagement.</b> The BS degree program in Construction Management will contribute appropriately to intellectual climate and creative exchange, professionalism, civic engagement, inclusiveness, cultural awareness, and respect for diversity. (A&T Strategic Goals 1, 2, 4, and 5)	This outcome will be measured by faculty's efforts in engaging in community economic development initiatives as well as recruiting a diverse faculty who is capable of contributing to intellectual climate and cultural awareness.	The CM faculty is diverse across national and international boundaries. Some faculty are also very active in community engagement, offering various economic development activities.	The evidence presented by the faculty in his/her annual evaluation is used by the Chair to recommend areas that need improvement. Faculty have been asked to include a plan for improvement in his/her 5-year plan 2020.

- 1. Program Quality.** The BS degree program in Construction Management will achieve excellence and recognition for high quality in teaching and learning, including the achievement of national accreditation. (A&T Strategic Goals 2, 3, and 6)

The quality of the Construction Management program is gauged against the national standards established by the leading accreditation agencies in United States. These agencies include American Council for Construction Education (ACCE), Association of Technology, Management and Applied Technology (ATMAE), and the Accreditation Board for Engineering and Technology (ABET). ACCE is the leading accrediting agency for construction management programs internationally and has operational guidelines for reviewing and recommending accreditation of programs that meet the national standards adopted by the association by the construction industry. ATMAE is an accrediting body for applied technology programs, including construction management. ABET is also a leading accreditation agency that accredits engineering, engineering technology and applied science and technology programs.

For this program outcome, success is determined by the continued successful accreditation and/or re-accreditation of the CM program by the three accrediting agencies. The CM program was successfully re-accredited in 2016 by ATMAE for six years. In 2019, the CM program was also granted a conditional accreditation by ABET through to Fall 2021. The one concern expressed by the visiting team has been addressed. The program needed to ensure CM 401 offered similar experiences for seniors in content and was taken after most CM courses were completed. In 2020, ACCE re-accredited the CM program for 6 years with a standard third year report. The program had only 4 high recognitions and no warning and concerns (rarely seen).

Effective teaching and learning continue to be the cornerstone of CM faculty. The faculty continues to engage students both in the classroom and in the laboratory using modern pedagogy techniques and technology. To enhance their teaching effectiveness, faculty members attend various teaching seminars and workshops, including online teaching techniques. The annual faculty evaluation revealed that, on the average, each faculty member receives between 3.5 and 5.0 ratings, with averages closer to 4.5.

**2. Program Productivity.** The BS degree program in Construction Management will meet or exceed the University's goals for research/creative productivity, enrollment, retention, degree completion, and placement of graduates in jobs or graduate education. (A&T Strategic Goal 6 and vision for making a significant difference in the lives of those we educate)

**a. Research/Creative Productivity**

This outcome is measured by the level of scholarly productivity of the faculty. Table 2 presents the faculty productivity efforts in the areas of scholarly research, refereed publications, conference presentations, and grantsmanship. As can be seen from the table, the CM faculty have been very productive during the reporting periods. In addition to research and grantsmanship, other scholarly activities engaged by the faculty include workshops and poster

presentations. In 2018-2019, one younger CM faculty received an NSF career grant for close to \$500,000.

**Table 2: Research and Creative Productivity**

Productivity Measure/Year	2016-2017	2017-2018	2018-2019	2019-2020
Publications	10	10	12	7
Conference Presentation	13	3	1	1
Other Scholarly activities		2	4	9
Submitted Grants (#/\$)	11(\$1,168,364)	5 (\$1,189,231.16)	19 (\$3,689,866.44)	15 (\$2,649,098.72)
Funded Grants	5 (\$62,833.33)	2 (\$37,974)	5 (\$787,340.28)	4 (\$50,900.28)

**b. Enrollment, Retention, Degree Completion and Placement of Graduates**

Enrollment, Retention, Degree Awarded Data can be found in Table 3. Retention and Persistence Data is represented at the Department Level and is not disaggregated. Enrollment in the CM program has remained relatively consistent with a spike in enrollment for Fall 2019. Degrees awarded in 2016-2017 and 2017-2018 remained steady with a slight jump in 2018-2019. We expect a consistent graduation rate for the 2019-2020 year following the summer session 2020.

**Table 3: Student Productivity Data- Enrollment, Degrees Awarded, Retention and Persistence**

Enrollment	Fall 2016	Fall 2017	Fall 2018	Fall 2019
Construction Management	76	68	70	78
Degrees Awarded	2016-2017	2017-2018	2018-2019	Just Fall 2019
Construction Management	13	13	16	2
Department Retention				
Yr 1	78.6	77.0	79.4	
Yr 2	69.4	69.7		
Yr 3	64.3			
Department Persistence				
Yr 1	81.8	55.6	61.5	
Yr 2	54.5	44.4		
Yr 3	54.5			

Enrollment and degree completion can be affected by many factors. Access to classes, especially general education courses often pose some challenges, such as schedule conflicts. The faculty has addressed most issue where possible. Also, plans have been made to increase student recruitment in order to increase the enrollment. Examples of such plans include updating or writing new community colleges articulation agreement and outreach activities at the local and regional high schools. Additionally, the College of Science and Technology's Office of Student Success (OSS) supports recruitment efforts of the department of built environment.

The OSS works closely with the University's Admissions Office to recruit quality students and to enlighten prospective students about the construction management program. Efforts were also made to reach out to employers to attend career fairs for job recruitment. Better advising strategies were also developed to increase retention rates, where many of our CM students struggle financially and need to maintain their outside jobs.

Placement of CM graduates posed no challenges whatsoever. All CM graduates were able to get employment offers with 90 days of graduation. Examples of companies that often recruit our students and their initial positions are shown in Table 4.

Table 4. Job Titles and Construction Sector of Graduates (2017/2018)

Employer	Position Title	Type of Sector
Toyota	Safety Co-op	Automobile
Whitney Turner Construction	Field Engineer	Commercial
Balfour Beatty Construction	Intern	Commercial
Holder Construction	Project engineer	Commercial
Rightbuild International- Accepted internship	Assistant Project Manager	Commercial
Gilbane Building Company	Office Engineer	Commercial
Frank L. Blum	Project Manager	Commercial
Gilbane Building Company	Office Engineer	Commercial
Messer Construction	Field Engineer	Commercial
Hensel Phelps	Field Engineer	Commercial
Sterling Construction Services	Project Engineer Intern	Commercial
Frank L. Blum Construction Company	Field Member	Commercial
Meritage Homes	Project Coordinator	Residential
DR Horton	Project Coordinator	Residential

- c) **Program Contributions to Community Engagement.** The BS degree program in Construction Management will contribute appropriately to intellectual climate and creative exchange, professionalism, civic engagement, inclusiveness, cultural awareness, and respect for diversity. (A&T Strategic Goals 1, 2, 4, and 5)

The CM faculty have always been at the forefront of community engagement by being an advocate for community housing and economic development. For over 20 years, some of the CM faculty members have undertaken various successful community economic and skills empowerment initiative programs that have empowered the community. These projects have ranged from community revitalization to business development and job skills empowerment for low-to-medium income residents of the southeast Greensboro community. Other faculty-led

community engagement activities included mentoring of community under-privileged children and sports activities to support the university health faculty awareness program.

In addition to these community empowerment initiatives, the CM faculty has formed partnership with other colleagues within and outside the university. Below are few of the intellectual collaborations our CM faculty have engaged in:

- Dr. Shofoluwe collaborated on research and community outreach programs with colleagues in the NCAT College of Agriculture and Environmental Sciences. He also collaborated on published scholarly manuscript and conference presentations with a colleague from Purdue University and Morgan State University. He is also a graduate faculty member of Indiana State University in the institution's consortium PhD in Technology Management program. Dr. Shofoluwe is also a visiting professor at Bells University of Technology in Ota, Nigeria where he currently supervises 4 PhD students.
- Dr. Ofori-Boadu collaborated with NCA & T College of Engineering, Joint School of Nanoscience and Nanoengineering and Chemistry department resulting in one (1) funded grant, three (3) journal publications, one provisional patent application, two (2) proposals under review, five (5) national presentations, one (1) local presentation, and one journal article submission. She also collaborated with colleagues at NCSU, NCAT College of Agriculture and Environmental Science, and College of Engineering on grants proposals and funded grants. She also collaborated with the University of Nevada, Las Vegas; Morgan State University; University of Texas; Pittsburg State University on funded grants and national presentations. Dr. Ofori-Boadu also collaborated with the National Association of Home Builders resulting in two student competition team participation. She has also collaborated with colleagues at Birmingham City University and Kwame Nkrumah University of Science and Technology on scholarly journal publications.
- Dr. Mohammed Mawlana collaborated with colleagues in the NCAT College of Engineering on research and other scholarly activities. He also collaborated with colleagues on scholarly publications at the University of Twente.
- Dr. Christian Bock-Hyeng collaborated with colleagues in the NCAT College of Agriculture and Environmental Sciences. He has also collaborated with colleagues at the Russian People Friendship University and Catholic University Institute Buea-CUIB. He has also co-presented scholarly articles with colleagues at the catholic University, Cameroon. Furthermore, Dr. Bock-Hyeng

## **b) Student Learning Outcomes**

The four student learning outcomes for the BS in Construction Management program are summarized in **Table 5**, showing the relationship between the outcomes, the assessment and results, and the improvements made. Prior to 2018-2019 academic year, multiple courses were used to assess the outcome. Starting in the 2018-2019 academic year, all SLOs are being measured using the senior capstone course, CM 401. More detailed narrative follows the table.

Table 5. Student Learning Outcomes, Assessments, and Improvements

Name of Program	Program Outcome	Method of Assessment	Results of Assessment	Use of Assessment Results for Improvement
BS in CM	<p><b>Communication Skills.</b> Students completing the BS degree program in Construction Safety will exhibit effective communication skills (written, oral, graphic and interpersonal) appropriate for professionals in this field of study at the bachelor's level.</p>	<p>2017-2018: Evaluated using ABET SLO G, in CM 401 oral presentation. 2018-2019: Evaluated using SACS SLO in CM 401. Students' writing skills and oral presentation are used to measure the outcome in CM 401 for 2018-2019. Fall 2019 – Evaluated using SACS SLO in CM 401.</p>	<p>2017-2018: 89% met the target of 80%. 2018-2019: 100% (N=7) met the target with disaggregated average of 90.2%. Student average in written communication was 82%. Fall 2019: 100% (N=2) of students met the target with a class average of 87.5%.</p>	<p>Although the set target was reached and /or surpassed, faculty continued to emphasize the importance of oral and written communication. More structured writing assignments were given and oral presentation techniques were emphasized.</p>
	<p><b>Critical Thinking Skills.</b> Students completing the BS degree program in Construction Management will effectively use quantitative and/or qualitative analytical problem-solving skills appropriate for professionals in this field of study at the bachelor's level.</p>	<p>2017-2018: Evaluated using ABET SLO B, in CM 394. 2018-2019: Evaluated using SACS SLO in CM 401. Seniors are required to prepare a construction schedule and compute the early start and late finish for the project as well as the critical path of the project.</p>	<p>2017-2018: 100% of class met the target (N=16). 2018-2019: 66.2% met the target (N=7). For this assessment cycle, the outcome posed some challenges to the students. For Fall 2019, 100% (N=2) met the target with a class average of 90%.</p>	<p>The result was shared with the faculty who teaches the planning and scheduling course. More time would be spent explaining and solving complex problems relative to CPM scheduling and time computations.</p>
	<p><b>Disciplinary Expertise.</b> Students completing the BS degree program in Construction Management will demonstrate a level of discipline-specific expertise (knowledge, skills, and professionalism) appropriate for professionals in this field of study at the bachelor's level.</p>	<p>2017-2018: Evaluated using ABET SLO K in CM 216. For 2018-2019, the outcome was achieved through a senior-level course, CM 401 – Senior Capstone. Graduating students will be able to apply the principles and practices of applied construction project management in the field.</p>	<p>2017-2018: 89% of class met the target (N=18). 2018-2019: 100% of class (N=7) met the target of 80% with a disaggregated class average of 89.6%. For Fall 2019, 100% (N=2) met the target.</p>	<p>The faculty in charge will continue to improve course delivery with more challenging problems.</p>

	<p><b>Research/Creative Engagement.</b> Students completing the BS degree program in Construction Management will demonstrate ability to engage productively in the review and conduct of disciplinary research and creative professional activity appropriate for professionals in this field of study at the bachelor's level.</p>	<p>2017-2018: Evaluated using ABET SLO C in CM 450. For 2018-2019, the outcome was achieved through a senior-level course, CM 401 – Senior Capstone. Graduating seniors are required to research a given construction-related topic and write a terminal paper following the APA writing format.</p>	<p>2017-2018: 100% met the target (N=22). 2018-2019: 100% (N=7) met the target with a disaggregated class average of 82.6. For Fall 2019, 100% (N=2) met the target with a class average of 95.5%.</p>	<p>For 2018-2019, the students disaggregated average was a little over the set target, suggesting that some students still had troubles in researching a given topic and then developing a well-written report, following APA style. More emphasis will be devoted to writing mechanics and structure.</p>
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Table 5A: ABET SLO's matched to SACs SLO's for 2017-2018 Data\*

ABET SLO's	Matching SAC SLO's	Examples Courses Evaluated (assignment details-See ABET report)
(g) an ability to communicate effectively	1) Communication Skills	CM 401
(b) an ability to design and conduct experiments, as well as to analyze and interpret data	2) Critical Thinking	CM 394
(k) an ability to use the techniques, skills, and modern scientific and technical tools necessary for professional practice.	3) Disciplinary Expertise	CM 216
c) an ability to formulate or design a system, process, or program to meet desired needs	4) Research/ Creative Engagement	CM 450

\* The ABET SLOs used in the assessment measure satisfy the performance requirements under the SCACS SLO criteria.

1) **Communication Skills.** Students completing the BS degree program in Construction Management will exhibit effective communication skills appropriate for professionals in this field of study at the bachelor’s level.

For 2017-2018, ABET SLO “g” was used in CM 401. For 2018-2019, the outcomes were assessed through a senior-level course, CM 401 – Senior Capstone. Students were required to prepare a comprehensive report based on the capstone project requirements. They were also required to present an oral report based on their comprehensive written portfolio. Students’ competencies were measured using 4-point scale rubric for both written and oral communication skills, with 4 representing “Exceptional”. Table 6 shows the students’ performance.

**Table 6: Performance in Communication—Percentage at Target**

Academic Year	Proficiency Target	% meeting Target (N)
2017-2018	89%	89% (9)
2018-2019	80%	90.2% (7)
Fall 2019	80%	100% (2)

2) **Critical Thinking:** Students completing the BS degree program in Construction Management will effectively use quantitative and/or qualitative analytical problem-solving skills appropriate for professionals in this field of study at the bachelor’s level.

The key assessment objective of this outcome is for the graduating seniors to be able to apply quantitative, analytical and mathematical reasoning to solve construction problems. They are also expected to be able to evaluate and solve technical and managerial problems systematically. For 2017-2018, ABET SLO “b” was used in CM 394. Starting 2018-2019, the outcome was achieved through a senior-level course, CM 401 – Senior Capstone. Graduating seniors are required to prepare a construction schedule with activity timetable showing all relevant computations (early start, late start, early finish, late finish, and total float times) for the project. Students’ competencies were measured using 4-point scale rubric with 4 representing “Exceptional”. Table 7 shows the students’ performance. This outcome posed some challenges to the students in 2018-2019. The disaggregated class average was 66.2%; thus, the target (80%) was not met prompting the faculty in charge to implement a remedial action that would improve the students’ mastery of the subject matter.

**Table 7: Performance in Critical Thinking —Percentage at Target**

Academic Year	Proficiency Target	% meeting Target (N)
2017-2018	80%	100% (16)
2018-2019	80%	66.2% (7)
Fall 2019	80%	100% (2)

- 3) Disciplinary Expertise.** Students completing the BS degree program in Construction Management will demonstrate a level of discipline-specific expertise (knowledge, skills, and professionalism) appropriate for professionals in this field

The key assessment objective of this outcome is for the graduating seniors to be able to apply principles and practices of applied construction project management on the site. For this assessment, they were required to develop and provide a written report on construction site logistic showing effective movement of materials and equipment around the site. For 2017-2018, ABET SLO “K” was used in CM 216. In 2018-2019, the outcome was achieved through a senior-level course, CM 401 – Senior Capstone. Students’ competencies were measured using 4-point scale rubric with 4 representing “Outstanding”. Table 8 shows the students’ performance. Target for this outcome was met.

**Table 8: Performance in Disciplinary Expertise —Percentage at Target**

Academic Year	Proficiency Target	% meeting Target (N)
2017-2018	80%	89% (18)
2018-2019	80%	89.6% (7)
Fall 2019	80%	100% (2)

- 4) Research/Creative Engagement.** Students completing the BS degree program in Construction Management will demonstrate ability to engage productively in the review and conduct of disciplinary research and creative professional activity appropriate for professionals in this field of study at the bachelor’s level.

The key assessment objective of this outcome is for the graduating seniors to be able to research current issues in construction management and develop a comprehensive written report. Specifically, graduating seniors are required to research a given construction-related topic and write a terminal paper following the APA writing format. For 2017-2018, ABET SLO “C” was used in CM 450. For 2018-2019, the outcome was measured using a senior-level course, CM 401 – Senior Capstone. Target was met, as shown in Table 9.

**Table 9: Performance in Research/Creativity - Percentage Meeting Target**

Academic Year	Proficiency Target	meeting Target (N)
2017-2018	80%	100% (22)
2018-2019	80%	82.6% (7)
Fall 2019	80%	100% (2)

### **3. Evidence of Program and SLO Improvements Using the Results of the Assessment (Closing the Loop)**

### **Program Outcomes Improvements (Closing the Loop)**

- 1) Program Quality.** The BS degree program in Construction Management will achieve excellence and recognition for high quality in teaching and learning, including the achievement of national accreditation.

The CM program continues to maintain strong curriculum, as evident by its accreditation by three different accreditation agencies. The faculty remains strong and up to date in their respective disciplines. The quality of the program has lured many employers to our campus to recruit our students. The input of the CM advisory board also contributes to the program's continuous improvement. Specifically, the advisory board has been very active in reviewing the CM curriculum to ensure that it meets not only the accreditation standard, but also the construction industry needs. The board has also instituted a quality assurance program whereby CM faculty members will be paired with industry experts to review course contents and make recommendation for improvement (starts Fall 2020).

- 2) Program Productivity.** The BS degree program in Construction Management will meet or exceed the University's goals for research/creative productivity, enrollment, retention, degree completion, and placement of graduates in jobs or graduate education.

The CM faculty members continue to be productive in their respective disciplines. As can be seen from Table 2, the research and creative productivity of the faculty are commendable. The combined number of faculty publications and conference presentations as well as grants proposal submission were all time high for the reporting period. To keep the momentum, faculty were encouraged to increase their scholarly productivity through funded and other scholarly research, publications and presentations. The program will look at avenues to improve publication and grant productivity for older faculty. Also plans were made to increase student recruitment activities in order to increase the enrollment. Efforts were also made to reach out to employers to attend career fairs for job recruitment. Better advising strategies were developed to increase retention rates, but further improvements need to be made for students who struggle due to financial reasons and other academic challenges.

- 3) Program Contributions to Community Engagement.** The BS degree program in Construction Management will contribute appropriately to intellectual climate and creative exchange, professionalism, civic engagement, inclusiveness, cultural awareness, and respect for diversity.

The current level of CM faculty collaboration with colleagues at local, national, and international level is outstanding. Despite their current efforts, faculty will be encouraged to seek more collaborations, especially in the areas of joint grants proposal development.

Additionally, more efforts will be placed on community engagement and to increase the faculty intellectual capacity.

### **b. Student Learning Outcome Improvements (Closing the Loop)**

#### **(1) Communication Skills.**

Overall, the set goal for communication skills was met. However, faculty will continue to emphasize the importance of good communication skills in various classes. The current rubric will also be evaluated by the faculty and revision made, if necessary

#### **(2) Critical Thinking Skills.**

The faculty realized the need to improve the critical thinking skills of students as the set target was not met for 2018-2019. More time will be devoted in class in explaining the concepts of construction planning and scheduling. Also, more problems will be solved so that students can understand and learn how to compute all necessary information.

#### **(3) Disciplinary Expertise.**

Target was met on students' performance on disciplinary expertise in the latter years. Despite this achievement, faculty will continue to improve the course contents and delivery methods and techniques to ensure that students develop the mastery of the discipline.

#### **(4) Research/Creative Engagement**

The target proficiency for research and creative engagement objective was slightly met (82.6%). Analysis of student papers revealed weaknesses in organizing thoughts and in using APA writing style. More efforts will be devoted to proper placement of in-text citation using APA referencing guide. Students will also be taught how to organize references at the end of their research papers.

SACs Coordinator-Musibau Shofuluwe

Date:

Department Chair-Alesia Ferguson

Date