

Construction and Building Science Technology (CBST)

Program Review

Reporting Period: 2019-2022

Part 1: Program Overview

A. Program or Department Mission:

The general mission of the construction program, as contained in the Mission of the College, is to offer programs and activities that reflect those characteristics that help define an educated person. These characteristics include a level of general education that enables the individual to understand his or her culture and environment; the development of skills in analysis, communication, quantification, and synthesis necessary for further growth as a lifelong member of society; the identification of a system of personal values based on accepted ethics that lead to civic and social responsibility; and the attainment of skills that enhance the development of leisure activities and a healthful lifestyle. These characteristics are attained not only through organized courses and programs, but also through a variety of social, cultural, civic and other educational activities that are offered based on the needs of the community.

B. Summarize assessment results. Highlight successes and areas requiring improvement. Discuss what actions were taken based on the assessment results and any improvements that can be observed.

Internal Analysis (as it relates to progress in achieving unit goals)

- Construction Management Program was awarded another six years Re-Accreditation by American Council for Construction Education (ACCE) in July 2019. In 2015, ACCE changed its outcome-based standards regarding Accreditation and Re-Accreditation of Construction Programs. Program Coordinator and the faculty of CBST took every opportunity to attend all ACCE meetings and conferences to familiar themselves with the new outcome standards.
- The Student Learning Outcome Assessments for Construction Management Program satisfied ACCE requirement.
- The Program Coordinator and the faculty of CBST set efforts to maintain the CBST accreditation status and raise this program to be the best Two-Year program nationally. Jefferson State Construction and Building Science Program is well known for its high educational standards among other programs nationwide.
- Students from Jefferson State CBST Program are known to be JOB ready when graduating. The graduates of this program, often, have multiple job offers prior to graduation.
- CBST purchased and installed 21 computer stations with dual monitors in 2020 to update the computer lab in Room 236.

- Another 19 computer stations with dual monitors in 2021 replace older computers in Room 241 Computer lab.
- Three SMARTBoards replaced the traditional Dry-Erased boards in the classrooms. This SMARTBoards provide the opportunity for faculty to write, erase, PowerPoint presentations, and save their work for students.
- CBST is witnessing a continuous increase in enrollment.
- CBST continuously strive to recruit new students to the program. Although student enrollments in this program are successful, CBST attempts to expand its student population.

External Conditions that have impacted the unit. Describe the ones that have most significantly affected the unit and what actions the unit took to respond to those conditions.

- The general contractors licensing board fee (Acct. #229001) are funds derived from the annual Alabama General Contractors license dues. A percentage of all general contractor license fees are to be divided among all accredited construction and Civil Engineering Programs within the State of Alabama. Construction Management continue to receive these funds annually. These funds along with Jefferson State budget for CBST provide adequate support for CBST to purchase the necessary technology, equipment, and other needs of this department. The college's Financial Services Department and the Construction and Building Science Department work together to manage the balance of this account.
- Construction Management and Building Science and its Industry Advisory Committee (IAC) work closely together to advance the program. This committee has an immense impact on CBST curriculum and its network with the local construction industry.
- Construction and Building Science Technology has an Articulation Agreement with Tuskegee University. Based on this agreement, graduated students from Jefferson State Construction Management are able to transfer to Tuskegee University as third year (junior) Construction Science and Management (CSM) students.
- Construction and Building Science Technology has an organized Associated General Contractor (AGC) student chapter. Alabama AGC has been supportive of our AGC student chapter and has provided many opportunities to CBST student via general contractors networking, academic scholarship, involving CBST professional meeting, providing guest speakers, etc.
- AGC of Alabama awards two Academic Scholarship annually to two accomplished students who attend an accredited Construction or Civil Engineering program statewide. For the last seven years, Jeff State Construction Management students have been able to win five of these scholarships.

C. Program Admission and Awards

Students are admitted in Construction and Building Science Technology Program as they get admitted by the College. There are two options in CBST Department. One in Construction Management and one in Architectural/Civil Design. Both of these options offer AAS Degree, Certificate, and Short Certificate. Construction Management Degree has an Articulation Agreement with Tuskegee University (TU) in Tuskegee, Alabama, to continue for their BS degree in Construction Science and Management (CSM) program. Jeff State students who graduate from Construction Management Program have the opportunity to transfer to TU and continue their education as third year students in CSM program. Construction Management and Architectural/Civil Design, both have articulation agreements with Dunwoody College in Minneapolis, Minnesota. Graduates from Jeff State have the opportunity to continue their education to B.S. degree in Construction Management or Architecture at Dunwoody via Online.

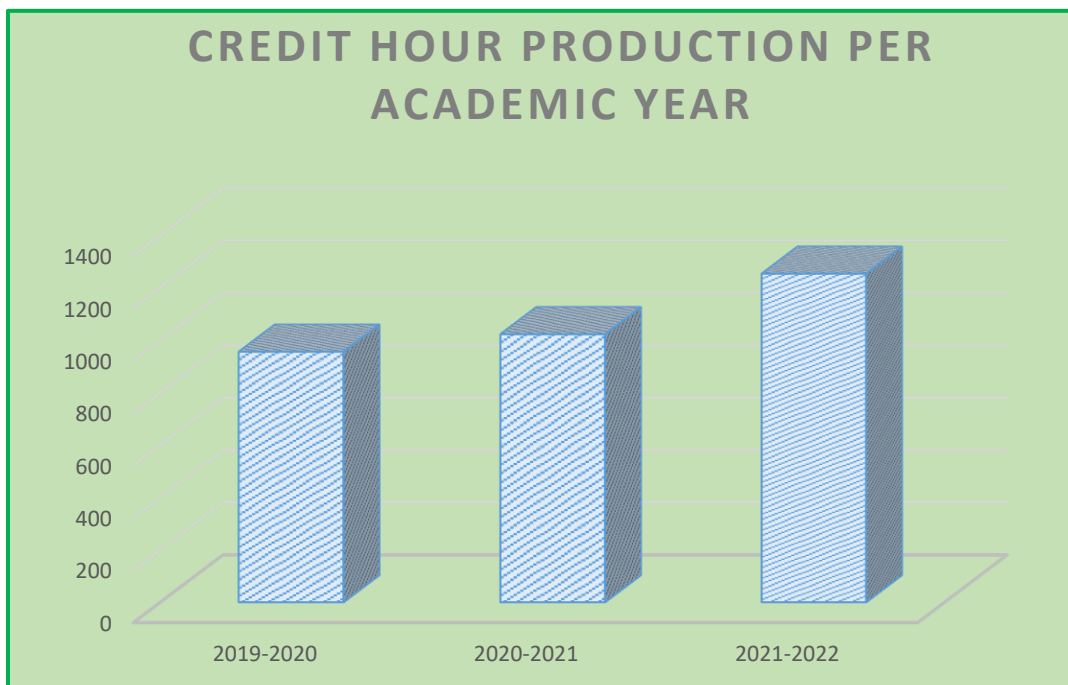
D. identify Data regularly collected and or reported as part of program compliance.

The following charts summarizes data provided by IRIR:

- a. Total Credit Hour Production per academic year.
- b. Total registrations per academic year.
- c. Total student head count per academic year.
- d. Total Degrees awarded per academic year. These degrees include Short Certificates, Advanced Certificates, and Associate Degrees.
- e. Program Demographics

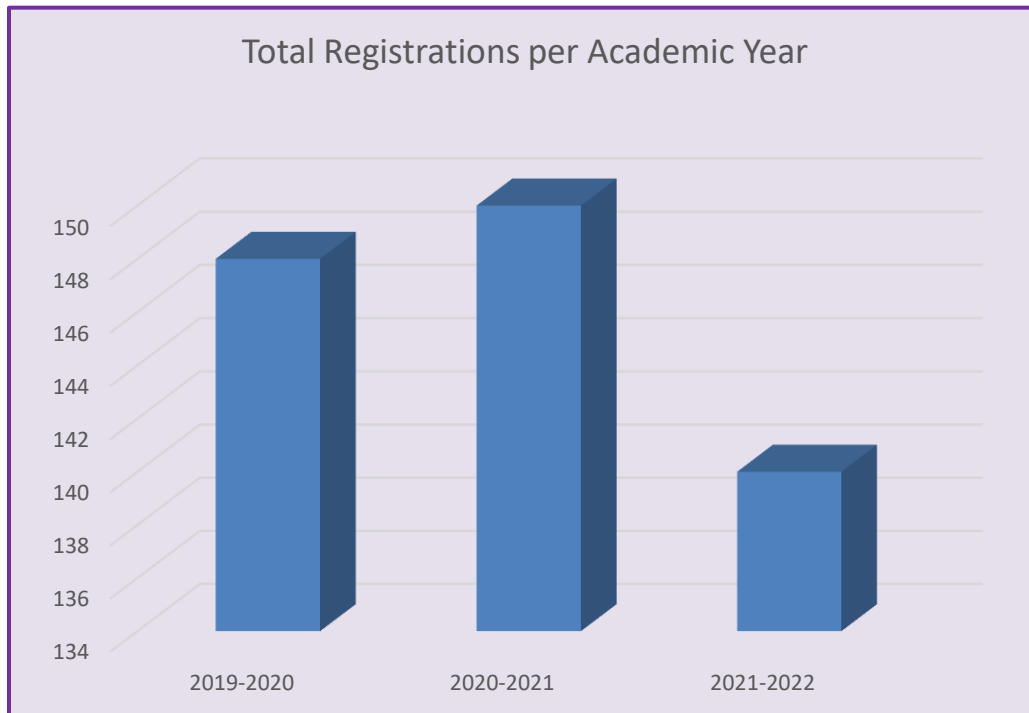
Credit Hour Production per Academic Year

Credit Hour Production (CHP)	
Academic Year	Construction and Building Science Technology (CBST)
2019-2020	956
2020-2021	1023
2021-2022	1254



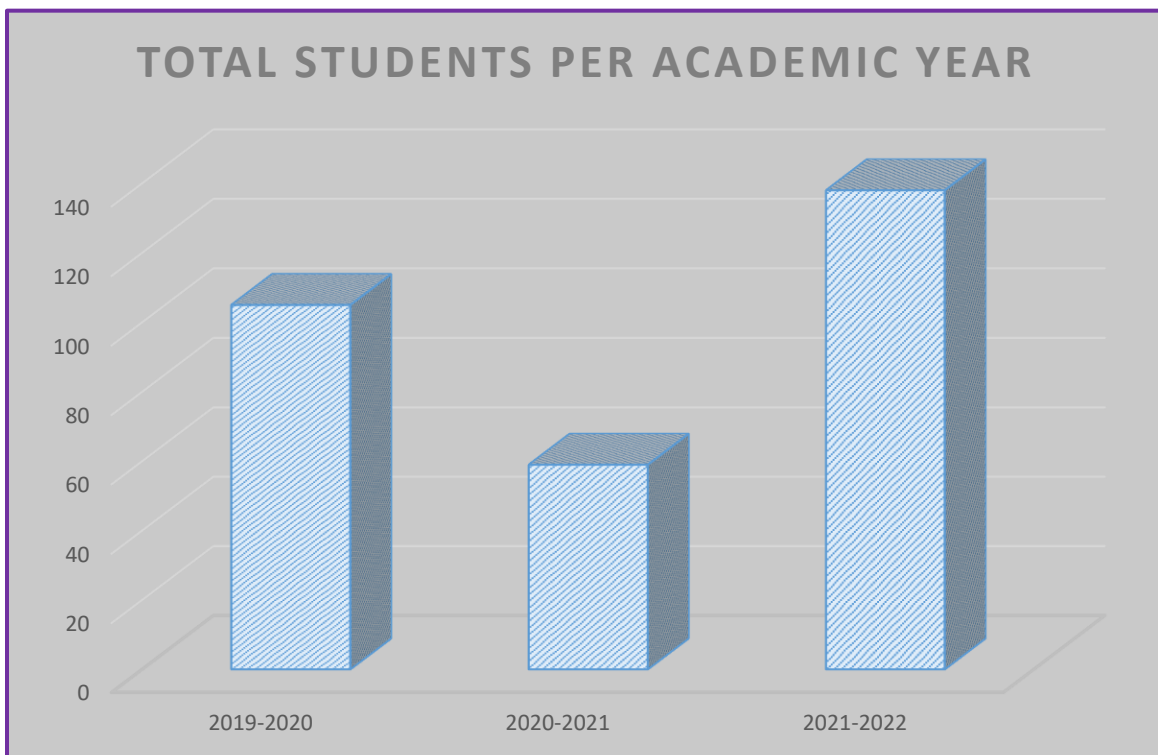
Total Registrations per Academic Year

Total Registrations per academic year	
Academic Year	Construction and Building Science Technology (CBST)
2019-2020	148
2020-2021	150
2021-2022	140



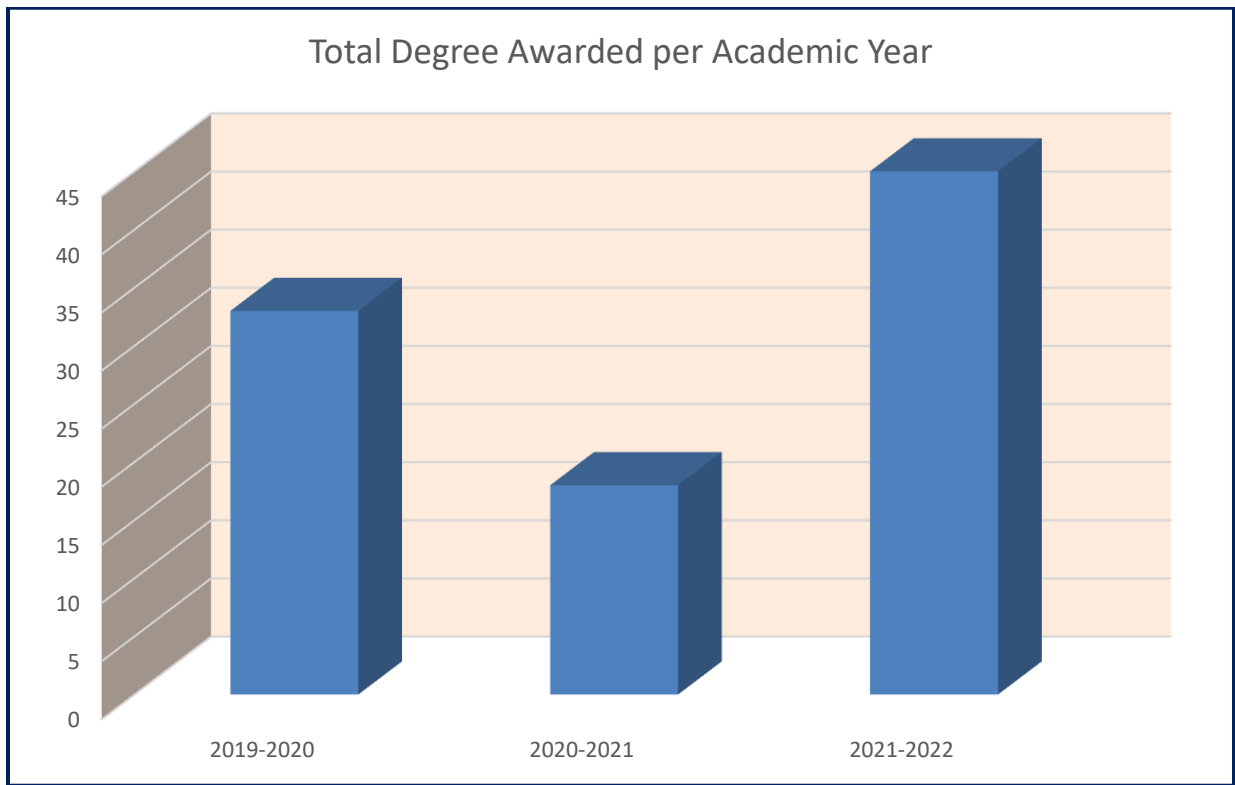
Total Students per Academic Year

Total Student per academic year	
Academic Year	Construction and Building Science Technology (CBST)
2019-2020	105
2020-2021	59
2021-2022	138



Total Degrees awarded academic year

Total Degrees awarded academic year	
Academic Year	Construction and Building Science Technology (CBST)
2019-2020	33
2020-2021	18
2021-2022	45

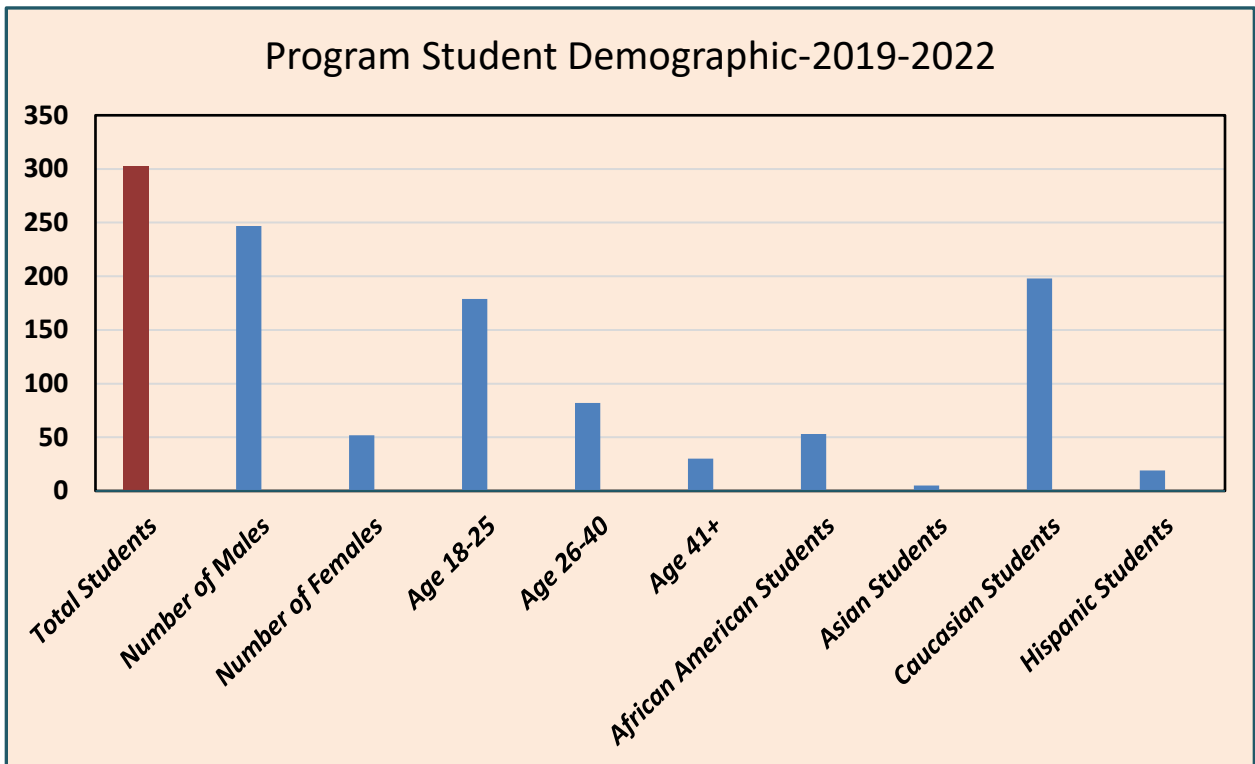


E. Program Demographics

The program demographic numbers are encouraging. The Data shows a good mix of students based on their ethnicity, age, and gender attend the Construction and Building Science Technology Program. Efforts may be needed to introduce more opportunities in building industries to female students. In today’s construction industry, females are encouraged to apply and work as Assistant Project Managers, Office Engineers, Field Engineers, Construction Estimator, etc. Most of these opportunities are unknown to High School students’ parents and students themselves. More efforts are needed to introduce these options to female high school students.

Program Student Demographic-2019-2022

Program Student Demographic-2019-2022		
Category	Student Total (2019-2022)	Percentage of Total Students
Total Students	302	100%
Number of Males	247	82%
Number of Females	52	17%
Age 18-25	179	59%
Age 26-40	82	27%
Age 41+	30	10%
African American Students	53	18%
Asian Students	5	2%
Caucasian Students	198	66%
Hispanic Students	19	6%



F. Method of Delivery

The main delivery method for CBST courses is in-person delivery via classrooms. However, when the needs arise such delivery can be modified to course Hybrid or Online deliveries.

G. Goal Progress

- Both of the Department computer labs located in HMB, rooms 236 and 241 were updated with a total of 40 double monitor up-to-date computer stations. Furthermore, these computers were loaded with updated CAD and Microsoft Project software. It is one of the Department's goal to maintain updated and new software providing students with available industry technology.
- CBST Department purchased four 42" commercial advertising TV monitors and hardware for recruitment purposes and to provide program information/updates. Three of these monitors have been installed in the Harold Martin Building and one to be used as a mobile unit to help with off campus recruitment. Positive feedback and comments have been received from current and incoming freshmen students.
- The Department is an academic member of the Associated Schools of Construction (ASC). This academic organization represents schools of construction internationally. The Construction Program at Jefferson State Community College is one the few Two-Year accredited program that is a member of this prestigious academic organization. This membership provides our construction program to have international exposure to other schools of construction programs.
- The Construction Management Program established an academic student chapter for Associated General Contractors of America (AGC). This national industry organization provides vast opportunities for the students at this Department. AGC offers a network of local and national contractors to students who can be potential employers of the graduates. It also offers a vast variety of academic scholarships to the qualified students that can assist in paying for tuitions, books, and other school expenses.
- Faculty attended the American Council for Construction Education (ACCE) Annual Conference in Jacksonville, Florida. This conference was predominantly intended to explain changes in the ACCE Accreditation process and requirements. Faculty attended extensive training, workshops, and meetings to apprehend such changes.
- Program coordinator, faculty, and Industry Advisory Committee (IAC) for Construction and Building Science Technology, collectively, determine the needs of the department. Program Coordinator reviews these needs and include them in the annual departmental budget to be provided.

H. Describe the adequacy of resources to achieve goals.

- The departmental budget in addition to the annual Alabama General Contraction Funds have been adequate to provide the needs of this department.

Part 2: Program/ Department Changes

A. Program/Department Goal Changes

Following Goals have been modified for this review period:

More efforts needed to inform locals about CBST. Hence, increase enrollments in Construction and Building Science Technology. More building science graduates are needed for the industry.

- Explore and/or develop other degree options in Construction and Building Science to accommodate for the needs of industry. (*Ongoing goal*)
- Create a comfortable learning environment for CBST faculty and students.
- CBST at Jefferson State in one of the only 14 Two-Year Construction Management Program nationwide that accredited by the American Council for Construction Education (ACCE). The Program Coordinator and the faculty of CBST set effort to maintain the CBST accreditation status and raise this program to be the best Two-Year program nationally.

Part 3: Evidence of Staff Participation in Program Review

A. Describe how the unit staff participated in the program review process. Include specific dates for meetings held or activities conducted.

- At this time, The Construction and Building Science Technology (CBST) Program is functioning by only one full time Instructor/Student Advisor/Program Coordinator. During the course of this review, the Program Coordinator has been the only one who contributed to this program review process.

B. List names and titles of all participants in this program review.

- Dr. Mike Safavi, AIC, CPC
Construction and Building Science Technology Program Coordinator
205-856-7847
msafavi@jeffersonstate.edu

C. Attach advisory committee minutes (if applicable) and list of members. Describe any changes made in the unit as a result of input from the advisory committee.

- The Construction and Building Science Technology Program and its Industry Advisory Committee meets twice a year. One meeting is arranged in the Fall semester and the second one in the Spring semester. This group is made up of professionals in construction industry and education. The advisory committee receives program information and they provide valuable feedback and input to the program, which contributes to the program's overall success. Members of the Construction and Building Science Industry Advisory Committee include the following:

Name	Place of Employment
Bob Baker	Hinkle Roofing
Danielle Simmons (<i>president</i>)	Robins & Morton
Brent Atkinson	Alabama Home Builder
Payton King	Nelbran Glass, Inc.
Jeff Rodgers	AGC Alabama
Bill Caton	AGC Alabama
Chris Foster	Foster Construction
Corey Collier	BRASFIELD & GORRIE, L.L.C.
Scott Kelley	Sherman Industries
Nathan Terrell	Hoar Program Management
Byron McCain	Const. Education Foundation of AL.
Charlie Vick	B.L. Harbert International
Alan Duke	Hamer Law Group, LLC
Blair Minyard	B.L. Harbert International, LLC
Chris Stricklin	Dunn University, President
Blake Toole	BL HARBERT INTERNATIONAL

D. Industry Advisory Committee Meeting Minutes:

MINUTES OF THE
BUILDING SCIENCE PROGRAM
JEFFERSON STATE COMMUNITY COLLEGE

2019-2020 Academic Year

Date: Friday, November 1, 2019

Time: 12:00 pm

Place: Shelby Campus Health and Science Building

Present:

Brent Atkinson	Alabama Home Builder
Payton King	Nel bran Glass, Inc.
Danielle Simmons	Robins & Morton
Nathan Terrel (alternate)	HPM Construction, Inc.
Norma Grant Bell	Jefferson State Community College
Mike Safavi	Jefferson State Community College

Agenda and Items for Discussion:

- A. Welcome and Introductions- Mike Safavi, Program Coordinator
 - B. Ongoing Department goals
 - C. American Council for Construction Education Site Visit (ACCE)
 - D. Input and Feedback
1. Welcome and Introductions
 1. New members to the committee
 - i. Danielle Simmons- Alumni
 - ii. Brent Atkinson- Alumni
 - iii. Payton King- employed one of the college's former BIS students prior to her transferring to Auburn University.
 - iv. Nathan Terrel (alternate)- HPM Construction, Inc.
 2. Minutes for the February 1, 2019 Advisory Meeting Minutes were approved.
 3. The department is looking to develop hybrid and online curriculum for their current courses. Many of the students enrolled would benefit from a flexible schedule when pursuing their degree.
 4. American Council for Construction Education (ACCE) site visit was March 9 -11, 2019. There were 13 new standards that were associated with Student Learning Outcomes. The Construction Management Program had to provide documentation showing the required Students Learning Outcomes (SLO's). The visiting team , overall, were pleased with these documentations and their presentations. The average program had about 5 weaknesses and 4 concerns in 2018-2019 visits. Jefferson State's program had only one concern and one weakness.
 1. Their concern was the preparation for replacing Murray Jones who had stated he would be retiring at the end of the Fall term. President Brown explained to the visiting team that the college must follow the guidelines set forth by the Alabama College System with regards to faculty replacement and hiring practices. The site team understood but still had to cite the concern on the report. Mike stated that he was able to persuade Murray Jones to stay until the end of the Spring 2020 term.
 2. The program's weakness was addressing the standard of ethics. The standard states that ethics must be discussed with students. The site team suggested that the program add an ethics question to their test. This will provide proof that it has been discussed.
 3. The college earned a full 6-year reaccreditation. This was announced in ACCE July meeting in Philadelphia, PA.
 5. Future Goals of the program
 1. Job Safety Officer – there is only 1 university that offers such program. Mike stated that the college would only need to add a few classes to their existing curriculum to offer this degree option.

2. Sustainable Specialist- at this current time there isn't a clear road map as to how this option could be crafted for offering. There is only 1 course being offered in the department that matches this option.
 - i. Dean Grant Bell stated that the college would need industry to be fully engaged to explore either of these options. That the demand would need to be fully expressed by industry in the state and that it requires a lot of front-end work before it can even get going towards implementation. Programs are data driven and would be required in order to support pursuing either option.
 - ii. Mike stated that in the state of Alabama it would be low demand for them. Places like Alaska that its construction production period is about 3 months out of the year, there would be much higher demand due to their main industry of oil wells construction. He also stated that he will poll this area for the need of Safety Officers.
6. Mike shared pictures from an ACCE site visit in Texas he participated in, with the attending members. a discussion took place among the group.
7. Input and Feedback- none currently
8. Mike expressed to the group how important their roles are as Industry Advisory Members and how their opinion assists the department. Their input is crucial in making sure they are meeting the needs of the local industry and updating the curriculum.
9. Mike thanked the members for their attendance. Meeting was adjourned.

Next Meeting: TBA

Meeting adjourned: 1:40 p.m.

Signed: M. Safavi
Program Coordinator

Date Approved: 12/5/2019

Distribution:

Academic Dean
IAB members

MINUTES OF THE
BUILDING SCIENCE PROGRAM
JEFFERSON STATE COMMUNITY COLLEGE

2020-2021 Academic Year

Date: June 24, 2021

Time: 12:00 p.m.

Place: Dr. Judy Merritt Building

Present:

Bob Baker	Hinkle Roofing
Payton King	Nelbran Glass, LLC
Dannielle Simmons	Robins and Morton
Nathan Terrel	Hoar
Blair Minyard	BL Harbert
Joseph Seagle	JSCC Student
Jeff Rodgers	Alabama Associated General Contractors
Tymber Carlisle	

Steven Carlisle	Jefferson State Community College
Mike Safavi	Jefferson State Community College
Deana Goodwine	Jefferson State Community College
Dr. Brian Gordon	Jefferson State Community College
Danielle Coburn	Jefferson State Community College
Keith Brown	Jefferson State Community College

Agenda and Items for Discussion:

1. Welcome and Introductions
2. Program Update
3. Open Discussion
4. Adjourn

1. Welcome and Introductions

Mike Safavi, Program Coordinator welcomed everyone in attendance for coming to support the program. New appointees to the advisory board; Mr. Nathan Terrell, Sr. Project Manager and Associate Facilities Director for Hoar Construction and Mr. Corey Collier, Project Manager for Brasfield and Gorrie. He introduced new Building Science instructor Steven Carlisle. Mr. Carlisle is a graduate of the program and was the first student who took advantage of the articulation agreement between Jefferson State and Tuskegee University. He also introduced the two new members to Jefferson State's administration: Deana Goodwine, Associate Dean for Career Programs and Dr. Brian Gordon, Dean of Instruction.

2. Program update

- A- Building Science student Joseph Seagle, is the recipient of the 2020 Howard and Juanita Savage Scholarship, awarded by Associated General Contractors of Alabama. Joseph will be graduating from the program at the end of the 2021 summer semester. Mike stated that in him taking the position at Jefferson State in 2015 it was his goal to get the students of the program involved with AGC. This involvement has resulted in four scholarships in the last six years won by the building science students.
- b. The program faced several challenges last spring when Covid-19 hit in March. One of them being the change in mode of delivery for courses. Mike stated that prior to Covid-19 his students nor himself had any experience with blackboard. The program had to figure out how to provide the students the instruction they needed to successfully complete the semester, which was not an easy task, but they were able to achieve it. Through it all they were able to meet the student learning outcomes. He also noted that the students passing grades were higher using this format but the overall feeling with regards to online learning was not favorable.
- c. The program generally gains students when the industry and or the economy is in low demand or slow, but this was not the case in his opinion. The program loss students during this time period. Mike suggested that perhaps it was the receiving of the \$600 checks that was contributing to industries labor shortages. Despite all challenges, the Program has a great number of graduates. The Program awarded 37 AAS Degrees and Certificates in Spring 202

3. Open Discussion on the following:

- Effects of the Pandemic on Building Industry?
- On Industry Work Force (shortage)?
- On Job Sites Performance?
- On Project Costs?
- Lumber and Material Cost Increases?
- New knowledge for oncoming graduates?
- Building Industry worst challenge?
- New required software?
- Any changes in salaries?

- a. Mike asked Bob Baker of Hinkle Roofing if he could speak to any of the questions, he presented in the PowerPoint. Bob stated that for his industry which is commercial and residential they have been busy throughout the pandemic due to the number of natural disasters and people receiving stimulus checks. He also pointed out that it was not the lack of laborers (actual roofers onsite in the field) they fell short on it was with positions such as estimators and project managers that they did.

1. Mike stated that he would like for Bob to contact him when he is unable to fill those positions. Bob stated that he has and will continue to do so. Mike agreed that in the past he was able to communicate with the students more effectively about industry partner needs when students were with him face to face, now he can only send this information via email.

Mike followed up with a question with regards to lumber costs, has there been an increase and has it had an impact on them? Bob stated that material costs have increased but they just inform the client / customer of such costs and that it also helps that the news covers these topics as well so most of their customers are well informed. It has not been an issue for them.

Jeff Rogers of Alabama Associated General Contractors stated that industry caught a break with the pandemic. Contractors were having more performance issues prior to the pandemic because there were so much work contractors were having to depend on subcontracting with others, so the quality of work was not the best.

Mike followed up with a question of lack of labor or market decrease. Jeff stated there are pockets of Alabama that has experienced a slower market but for the first time in a while work was flat and payroll had fallen off. He also stated that Alabama was in the top 5 last year with regards to construction, but it has since fallen a bit.

- Mike brought back his diagram of his current and past enrollment and stated that he believes the stimulus checks have played a role in the shortage of workers in the industry and in his enrollment. Bob Baker stated that if Mike's theory was true about low enrollment is generally due to high industry demand, then his graph is correct.

Bob stated that more promotion needs to be done informing potential students and parents that they can make just as much money and get into a lot less debt by graduating from a 2-year program than a 4-year school. He believes society needs to do better and stop stigmatizing the community college education system.

- Mike stated that he had been in talks with the Associate Dean Deana Goodwine about how he would like to make the building science website more interactive and exciting for potential students. It is his belief that it needs more WOW to it. He also would like to hold a job fair twice a year. In his experience when talking to parents along with their children they believed that JSCC Building Science program was about hammers and nails. That only after explaining to them what the two program options are

about, it becomes clear to them. There are 144 Construction Management programs in the United States of them only 13 are accredited and JSCC Construction and Building Science program is one of them. He believes this alone should bring more students to his program but there isn't enough marketing done.

- President Keith Brown asked if Mike used any social media and has he worked with JSCC's social media team. Mike, no to both questions. President Brown encouraged him to increase his social media presence.

- Mike was also encouraged to utilize the Alabama College System's social media presence because it is strong.
- Blair Minyard invited Mike to introduce the program at the American Society of Plumbing Engineers meeting in which she is the president.

Jeff asked about the Safety option mentioned in the meeting minutes from the last meeting; what is the progress with that if any.

- Mike stated that he is still working on collecting information on it and with his help he could possibly have that option available by next Fall 2022.

Next Meeting: TBA

Meeting adjourned: 1:35 p.m.

Distribution: The Membership
Division Chair
Academic Dean
Others, as appropriate

Approved: [M. Safavi](#)

MINUTES OF THE
BUILDING SCIENCE PROGRAM- BUDGET COMMITTEE
JEFFERSON STATE COMMUNITY COLLEGE

2021-2022 Academic Year

Date: Thursday, April 7, 2022
Time: 12:00 pm
Place: 4600 Valleydale Road

Present:

Blair Minyard	American Society of Plumbing Engineers (ASPE)
Dannielle Simmons	Robins and Morton (IAB President)
Alan Duke, Jr. Esq.	Hand Arendall Harrison, LLC
Bob Baker	Hinkle Roofing
Murray Jones	Retired JSCC
Corey Collier	Brasfield & Gorrie

Guests

Justin Church	Kelly Natural Gas Pipeline
M. Kelli Sandford	Talladega County Schools
Gina Deupree	Talladega County Schools

Deana Goodwine	Jefferson State Community College
Mike Safavi	Jefferson State Community College

1. Welcome and Introductions: Danielle Simmons, Chair
2. Minutes approved from the December 2, 2021 meeting
3. Program Update: Mike Safavi, Program Coordinator
 1. The program went through a curriculum change in which they lowered the number of credit hours required for the Short-Term Certificate (STC) and Certificate (CER) for both program options; Architectural/ Civil Design and Construction and Building Science. The STC went from 27 credit hours to 18 and the CER from 33 & 32 credit hours to 30. These curriculum changes did not impact the course requirements needed for the associates degree. Each attendee was provided a curriculum information sheet with program requirements.
 2. The program will be offering a CAD class again this fall semester at the Shelby campus. Each attendee was given a FALL COURSE OFFERING that listed AET 110 Basic Architectural CAD and AET 191 Basic Information Modeling (BIM). A discussion took place among the members.
 - i. Blair asked if there are more computers available for teaching either of the courses or is the limit still at 5 capable computers. Deana stated that Blair taught AET 110 last Fall for the college and at the time there were only 5 computers but since then a new computer lab has been set up and the capacity for the course has increased. Mike added that a new plotter is also being purchased for that lab.

Mike encourages them to share the information on the class with their colleagues

4. Software and Curriculum Development: Danielle Simmons, Chair

1. Danielle stated that her vision for the IAC (Industry Advisory Committee) is a round table style meeting in which the group can provide information and feedback on what the industry trends and needs are and how the program can assist in meeting their needs.
 - i. She opened the floor for the committee to provide feedback on the software being used at their companies in comparison to what students are learning in the program.
 1. Mike asked the group if they believe the offering of AET 110 would be useful in industry because 2-D & 3-D modeling is so dominant and AET 191 provides emphasis in this area. – Murray Jones stated that he wasn't sure how relevant AutoCAD is right now in industry and any feedback from industry would be helpful. Blair stated that it really depends on the size and scope of the project it is intended for. There are some projects in which 3-d modeling isn't necessary. When it is a large-scale project the use of 3-D is critical.
 2. Alan asked if there is an estimating software. Mike stated that the program currently uses an estimating and scheduling software in their instruction even though it is not required by their accrediting body. Corey stated that it would be impossible and expensive to keep up with the number of changing software in the industry. A discussion took place about the various programs in industry including Bluebeam and P6. Mike talked briefly on training that was formally provided for "free" by P6 developers and now it is at a cost. He then stated that if Brasfield & Gorrie would be willing to train faculty in using P6 that would be great. Murray stated that learning P6 is complicated, and Corey agreed most of it is through trial and error.
 - a. Corey asked about how much time goes into each course if someone in industry was interested in instruction. Blair stated that in her experience with instruction it was about 24 hours per month for one course between class preparation and actual class instruction.

Next Meeting: TBA (FALL semester)

Meeting adjourned: 1:23 p.m.

Signed: M. Safavi
Program Coordinator

Date Approved: _____

Distribution:

Academic Dean
Others, as appropriate

The industry advisory committee receives program information and they provide valuable feedback and input to the program, which contributes to the program's overall success.