

**Wayne Community College  
Program Review – 2021-2022**

**Name of Program:** Associate in Engineering

**Section 1: Program Overview**

**Mission/Purpose:** *As part of the review cycle, programs are asked to formally evaluate their mission/purpose statement.*

**Please provide your current mission/purpose statement.**

The mission of the Associate in Engineering Degree Program is to offer the academic requirements necessary to complete the Associate in Engineering Degree as well as prepare students to transfer to a four-year institution.

**Are you planning to revise your mission/purpose statement? YES**

**If so, please provide your revised mission/purpose statement and reason for the change.**

The mission of the Associate in Science Degree Program is to offer the academic requirements necessary to complete an Associate in Science Degree, as well as prepare students for transfer to a four-year institution.

The mission statement for the Associate in Science degree is appropriate as it is a transfer-oriented degree with a primary focus on helping students prepare for transfer to a four-year college or university. The reason for the change is to phase out the Associate in Engineering Degree program due to the shortage of credentialed faculty and the overlap in courses with the Associate in Science degree. Students interested in engineering should select electives from Associate in Science to include MAT 271, MAT 272, MAT 273, CHM 151, PHY 251, PHY 252, ECO 251, EGR 150 and DFT 170. All the engineering courses offered in AE are electives for AS.

**Describe how the program's mission aligns with the College's vision, mission, core values, and strategic goals. Identify which Institutional Goal(s) best align with your program and explain why.**

**Goal 1: Increase Student Access**

**Goal 2: Ensure Program Excellence**

**Goal 3: Improve Student Success**

**Goal 4: Ensure Institutional Quality**

The Associate in Engineering degree program is part of the College Transfer Division at Wayne Community College, which is an open-door admissions community college. Students representing each of Wayne County's ten public and private high schools attend each semester (Goal 1). The college's Vision and Mission Statements, as well as Core Values are aligned with the Associate in Engineering degree program and College Transfer Division through the diverse faculty and educational opportunities, both inside and out of the classroom, provided to our students. Organizations such as the Phi Theta Kappa Honor Society, North Carolina Scholars of Global Distinction, and WCC Honors Program represent both an institutional and division wide commitment to academic excellence. The Associate in Engineering degree program, along with the College Transfer Division are committed to ensuring program excellence (Goal 2). Three of the seven North Carolina Community College System's performance measures are attached to the College Transfer Division, which includes the Associate in Engineering; they are curriculum math student success, curriculum English student success, and college transfer student success. Wayne Community College is regularly in the top 25% of all 58 North Carolina Community Colleges (Goals 3 & 4).

**Associates, Diplomas, Certificates, and Pathways Offered:** Please list all associates, diplomas, certificates, and pathways offered in the table below.

Program Type (Associate, Diploma, Certificate, or Pathway)	Program Title
Associate	Associate in Engineering
Pathway	Associate in Engineering Pathway

**Activities to ensure program is current (2019-20; 2020-21; 2021-22 – Academic Year, Fall, Spring, Summer)**

List program curriculum changes, revisions, and/or deletions.

AE Curriculum Changes	Date – Updated / Revised / Deleted
MAT 280 – Linear Algebra	Fall 2019 – New Course
MUS 110 – Music Appreciation	Fall 2019 – Updated
ART 111 – Art Appreciation	Fall 2019 – Updated
GEL 111 – Geology	Fall 2019 – Add Course
CHM 251 – Organic Chemistry I	Fall 2019 – Add Course
CHM 252 – Organic Chemistry II	Fall 2019 – Add Course
ENG 011 – Writing and Inquiry Support	Spring 2020 – New Course
ECO 251 – Microeconomics	Fall 2020 - Updated
ECO 252 – Macroeconomics	Fall 2020 - Updated
DRA 111 - Theatre Appreciation	Fall 2020 – Updated
HUM 110 – Technology & Society	Fall 2020 – Updated
HUM 115 – Critical Thinking	Fall 2020 – Updated
ENG 111 – Writing & Inquiry	Fall 2020 – Updated
ACA 122 – College Transfer Success	Fall 2021 – Revised per NCCCS Memo (7/6/2020)
EGR 214 – Numerical Methods for Engineers	Fall 2021 – New Course

**Provide an overview of the significance of the program changes and improvements that occurred over the past three years.** (What were the program's / discipline's goals and rationale for expanding and improving student learning, including new courses, program degrees, certificates, diplomas, and/or delivery methods?)

The loss of a full-time instructor with a Ph.D. in Engineering has greatly decreased our course offerings, especially EGR 214, EGR 220 and EGR 225. We have been able to utilize a part-time Engineering instructor for DFT 170 and EGR 150 only. The delivery method for DFT 170 and EGR 150 moved to an online format. A collaborative effort with ECU and Pitt CC with an NSF grant has provided faculty dialogue regarding transferability of courses. The S-STEM grant has provided tuition assistance for four students at \$3000 per year. One student transferred after graduation to ECU and was awarded \$10,000 for his first year at ECU. The students must demonstrate at least \$3000 in unmet financial need via FAFSA. Student copies of EGR 150 textbooks will be available for student use at no charge once the S-STEM grant approves the purchase of a classroom library for the department. Students can apply for reimbursement of textbooks from the S-STEM grant administrator. The AE students can participate in learning activities with ECU including robotics challenges and astronomy field trips. Excursions with other engineering students help to promote the engineering field and networking with peers.

**Advisory Committee: dates, summary of minutes, activities (2019-20; 2020-21; 2021-22 – Academic Year – Fall, Spring, Summer)**

**Summary of Advisory Committee Activities**

Year	Meeting Dates	Recommendations / Activities
2019-2020	11/25/2019, 3/20/2020	In the fall, WCC met with the high school counselors of Wayne County's public/private high schools. Gave an update on the college transfer performance measures, introduced the three new achievement coaches, discussed the RISE initiative, and addressed concerns regarding transcript delivery. In the spring, we participated in the virtual College Transfer Professional Association meeting. UNC System transfer updates were provided, Transfer Advisory Committee updates were shared, the role of NC's Comprehensive Articulation Agreement in transfer efficiency, and RAISEME micro-scholarships.
2020-2021	12/08/2020	The new AATP and ASTP programs were introduced for students interested in teacher preparation. The National University partnership was introduced by Kaycee Denny. The S-Stem grant with ECU for AE majors was reviewed by Laura Buddin. ECU partnership Teach was reviewed. Six CT pathways for CCP and 52 for CTE were reviewed by Lorie Waller. Tammy Bishop explained the coaching imitative funded by Title III grant. Allison Daly discussed the global/worldview program at WCC and UNC-CH.
2021-2022	11/29/21	We highlighted the many opportunities WCC offered high school students and graduates. Emily Byrd discussed the bison Benefit scholarship. Lynn Mooring reviewed the ECU Partnership Teach. Laura Buddin and VP Brandon Jenkins used the WCC website to explain partnerships with ECU (Pirate Promise), FSU (\$10K pathway), NC Wesleyan (Wesleyan works), NCSU (C3 military connect), UMO (Trojan alliance), WGU and UNC Pembroke (Brave step). Lorie Waller answered questions about CCP/CTE.

*(Ensure that Advisory Committee Meeting Minutes are filed in the IE Shared Program Folder.)*

**Provide narrative for analysis of trends in the field or industry (emerging needs) that contribute to maintaining program relevance.** *(Based on advisory committee suggestions, environmental scans, industry demands, and other sources external to the program/discipline, how well is the program/discipline responding to the current and emerging needs of the industry and/or community? What resources might your program need?)*

The academic programs within the College Transfer Division, which includes the Associate in Engineering, are a partner to both Wayne County Public Schools and the universities and colleges within North Carolina. As such, we participate in meetings each year. Meeting with the public/private schools allows us to share initiatives and opportunities available to our students with the counselors who are an immediate contact point to high school students. System initiatives such as RISE are easily discussed and the potential impacts to high graduates are discussed. The advisory meetings also allow the high schools to have a voice concerning issues they face such as submitting transcripts. On the other hand, the CTPA allows us to stay aware of and discuss issues regarding student transfer so that we are equipped to help our students meet the ever-changing dynamics of university and college transfer. Student transfer is a complex process and requires constant learning on the part of our faculty and advising center.

## Section 2: Program Outcomes

### Outcome #1: Enrollment (*unduplicated*)

**Baseline:** 49 # (*Average of total enrollment for the last three years – 2018-19; 2019-20; 2020-21*)  
**Standard:** NA #  
**Target:** NA #

*We anticipate the elimination of the AE degree; these student numbers will be included in the AS degree enrollment.*

### Program Enrollment

Program Enrollment ( <i>unduplicated</i> )	
Academic Year (Fall, Spring, Summer)	Enrollment
2018-2019	48
2019-2020	52
2020-2021	47

### Enrollment by Ethnicity, Gender, and Age

Ethnicity & Gender	2018-2019		2019-2020		2020-2021	
	N	%	N	%	N	%
African American, Female	1	2.1%	0	0.0%	0	0.0%
American Indian/Alaskan Native, Female	0	0.0%	0	0.0%	0	0.0%
Asian, Female	0	0.0%	1	1.9%	2	4.3%
Caucasian, Female	4	8.3%	6	11.5%	2	4.3%
Hawaiian/Other Pacific Islander, Female	5	10.4%	0	0.0%	0	0.0%
Hispanic/Latino, Female	0	0.0%	3	5.8%	2	4.3%
Two or More Races, Female	0	0.0%	0	0.0%	0	0.0%
Unknown, Female	0	0.0%	0	0.0%	0	0.0%
<b>Female Total</b>	<b>10</b>	<b>20.8%</b>	<b>10</b>	<b>19.2%</b>	<b>6</b>	<b>12.8%</b>
African American, Male	4	8.3%	9	17.3%	7	14.9%
American Indian/Alaskan Native, Male	1	2.1%	0	0.0%	0	0.0%
Asian, Male	4	8.3%	1	1.9%	3	6.4%
Caucasian, Male	20	41.7%	20	38.5%	20	42.6%
Hawaiian/Other Pacific Islander, Male	6	12.5%	0	0.0%	0	0.0%
Hispanic/Latino, Male	0	0.0%	7	13.5%	9	19.1%
Two or More Races, Male	1	2.1%	2	3.8%	1	2.1%
Unknown, Male	2	4.2%	3	5.8%	1	2.1%
<b>Male Total</b>	<b>38</b>	<b>79.2%</b>	<b>42</b>	<b>80.8%</b>	<b>41</b>	<b>87.2%</b>
<b>Total</b>	<b>48</b>	<b>100.0%</b>	<b>52</b>	<b>100.0%</b>	<b>47</b>	<b>100.0%</b>

Ethnicity & Age Range	2018-2019		2019-2020		2020-2021	
	N	%	N	%	N	%
African American, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Asian, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Caucasian, Under the age of 18	2	4.2%	3	5.8%	1	2.1%
Hawaiian/Other Pacific Islander, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, Under the age of 18	0	0.0%	1	1.9%	0	0.0%
Two or More Races, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Unknown, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
<b>Under the age of 18 Total</b>	<b>2</b>	<b>4.2%</b>	<b>4</b>	<b>7.7%</b>	<b>1</b>	<b>2.1%</b>
African American, 18-24	2	4.2%	6	11.5%	4	8.5%
American Indian/Alaskan Native, 18-24	1	2.1%	0	0.0%	0	0.0%
Asian, 18-24	4	8.3%	2	3.8%	4	8.5%
Caucasian, 18-24	14	29.2%	15	28.8%	15	31.9%
Hawaiian/Other Pacific Islander, 18-24	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 18-24	6	12.5%	8	15.4%	10	21.3%
Two or More Races, 18-24	1	2.1%	2	3.8%	1	2.1%
Unknown, 18-24	0	0.0%	0	0.0%	1	2.1%
<b>18-24 Total</b>	<b>28</b>	<b>58.3%</b>	<b>33</b>	<b>63.5%</b>	<b>35</b>	<b>74.5%</b>
African American, 25-44	3	6.3%	3	5.8%	3	6.4%
American Indian/Alaskan Native, 25-44	0	0.0%	0	0.0%	0	0.0%
Asian, 25-44	0	0.0%	0	0.0%	1	2.1%
Caucasian, 25-44	8	16.7%	8	15.4%	6	12.8%
Hawaiian/Other Pacific Islander, 25-44	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 25-44	5	10.4%	1	1.9%	1	2.1%
Two or More Races, 25-44	0	0.0%	0	0.0%	0	0.0%
Unknown, 25-44	2	4.2%	3	5.8%	0	0.0%
<b>25-44 Total</b>	<b>18</b>	<b>37.5%</b>	<b>15</b>	<b>28.8%</b>	<b>11</b>	<b>23.4%</b>
African American, 45-64	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, 45-64	0	0.0%	0	0.0%	0	0.0%
Asian, 45-64	0	0.0%	0	0.0%	0	0.0%
Caucasian, 45-64	0	0.0%	0	0.0%	0	0.0%
Hawaiian/Other Pacific Islander, 45-64	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 45-64	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 45-64	0	0.0%	0	0.0%	0	0.0%
Unknown, 45-64	0	0.0%	0	0.0%	0	0.0%
<b>45-64 Total</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
African American, 65+	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, 65+	0	0.0%	0	0.0%	0	0.0%
Asian, 65+	0	0.0%	0	0.0%	0	0.0%
Caucasian, 65+	0	0.0%	0	0.0%	0	0.0%
Hawaiian/Other Pacific Islander, 65+	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 65+	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 65+	0	0.0%	0	0.0%	0	0.0%
Unknown, 65+	0	0.0%	0	0.0%	0	0.0%
<b>65+ Total</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
<b>Total</b>	<b>48</b>	<b>100.0%</b>	<b>52</b>	<b>100.0%</b>	<b>47</b>	<b>100.0%</b>

**Provide narrative for analysis of program enrollment.** *(Is enrollment increasing or decreasing? What are possible reasons for increase/decrease? Describe any action plans to improve or increase program enrollment.)*

Overall, enrollment has decreased over the last three years. The lack of consistency within the faculty available to teach, advise and recruit has contributed to the decline. Finding and retaining a professional with an Engineering Degree that is willing to work for our salary has proven to be difficult and detrimental to the program. Two failed searches for hiring have occurred. In addition, COVID may have been a factor in many students not returning to college. Female enrollment has declined as has Hispanic/Latino students with no known reason. Students in the 18-24 age group are not able to be in the AE program due to the Calculus requirement. Transitioning from AE to AS will increase this number since there is not a Calculus requirement for the AS degree. Overall enrollment in the program has been relatively consistent, but the lack in growth is evident.

**Identify Enrollment Action Items**

<b>Item</b>	<b>Action Items</b> <i>(What actions can be taken to increase enrollment in your program?)</i>	<b>Assessment of Action Items</b> <i>(How will you assess the results of action items?)</i>
1	Advise current AE students on the AS degree with selected elective offerings: MAT 271, MAT 272, MAT 273, CHM 151, PHY 251, PHY 252, ECO 251, EGR 150 and DFT 170.	College Transfer Advising Center (CTAC) and other data compiled
2	Offer AE students a new pathway to engineering under the AS degree.	Enrollment in upper level PHY and MAT classes

**Outcome #2: Retention****Baseline:** 51.3 % (Average of last three years – 2018-19; 2019-20; 2020-21; program retention)**Standard:** NA %**Target:** NA %

*We anticipate the elimination of the AE degree; these student numbers will be included in the AS degree enrollment.*

Year	Program Retention Rate
2018-2019	44.8%
2019-2020	43.6%
2020-2021	65.6%

**Retention by Ethnicity, Gender, and Age**

Ethnicity & Gender	2019		Fall 2019 to Fall 2020		Fall 2020 to Fall 2021	
	N	%	N	%	N	%
African American, Female	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, Female	0	0.0%	0	0.0%	0	0.0%
Asian, Female	0	0.0%	1	5.9%	1	4.8%
Caucasian, Female	2	15.4%	2	11.8%	1	4.8%
Hawaiian/Other Pacific Islander, Female	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, Female	1	7.7%	1	5.9%	0	0.0%
Two or More Races, Female	0	0.0%	0	0.0%	0	0.0%
Unknown, Female	0	0.0%	0	0.0%	0	0.0%
<b>Female Total</b>	<b>3</b>	<b>23.1%</b>	<b>4</b>	<b>23.5%</b>	<b>2</b>	<b>9.5%</b>
African American, Male	3	23.1%	4	23.5%	5	23.8%
American Indian/Alaskan Native, Male	0	0.0%	0	0.0%	0	0.0%
Asian, Male	1	7.7%	1	5.9%	1	4.8%
Caucasian, Male	6	46.2%	4	23.5%	9	42.9%
Hawaiian/Other Pacific Islander, Male	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, Male	0	0.0%	3	17.6%	3	14.3%
Two or More Races, Male	0	0.0%	1	5.9%	1	4.8%
Unknown, Male	0	0.0%	0	0.0%	0	0.0%
<b>Male Total</b>	<b>10</b>	<b>76.9%</b>	<b>13</b>	<b>76.5%</b>	<b>19</b>	<b>90.5%</b>
<b>Total</b>	<b>13</b>	<b>100.0%</b>	<b>17</b>	<b>100.0%</b>	<b>21</b>	<b>100.0%</b>

Ethnicity & Age Range	2019		Fall 2019 to Fall 2020		Fall 2020 to Fall 2021	
	N	%	N	%	N	%
African American, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Asian, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Caucasian, Under the age of 18	1	7.7%	1	5.9%	1	4.8%
Hawaiian/Other Pacific Islander, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Two or More Races, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Unknown, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
<b>Under the age of 18 Total</b>	<b>1</b>	<b>7.7%</b>	<b>1</b>	<b>5.9%</b>	<b>1</b>	<b>4.8%</b>
African American, 18-24	1	7.7%	2	11.8%	3	14.3%
American Indian/Alaskan Native, 18-24	0	0.0%	0	0.0%	0	0.0%
Asian, 18-24	1	7.7%	2	11.8%	2	9.5%
Caucasian, 18-24	6	46.2%	5	29.4%	8	38.1%
Hawaiian/Other Pacific Islander, 18-24	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 18-24	1	7.7%	4	23.5%	3	14.3%
Two or More Races, 18-24	0	0.0%	1	5.9%	1	4.8%
Unknown, 18-24	0	0.0%	0	0.0%	0	0.0%
<b>18-24 Total</b>	<b>9</b>	<b>69.2%</b>	<b>14</b>	<b>82.4%</b>	<b>17</b>	<b>81.0%</b>
African American, 25-44	2	15.4%	2	11.8%	2	9.5%
American Indian/Alaskan Native, 25-44	0	0.0%	0	0.0%	0	0.0%
Asian, 25-44	0	0.0%	0	0.0%	0	0.0%
Caucasian, 25-44	1	7.7%	0	0.0%	1	4.8%
Hawaiian/Other Pacific Islander, 25-44	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 25-44	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 25-44	0	0.0%	0	0.0%	0	0.0%
Unknown, 25-44	0	0.0%	0	0.0%	0	0.0%
<b>25-44 Total</b>	<b>3</b>	<b>23.1%</b>	<b>2</b>	<b>11.8%</b>	<b>3</b>	<b>14.3%</b>
African American, 45-64	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, 45-64	0	0.0%	0	0.0%	0	0.0%
Asian, 45-64	0	0.0%	0	0.0%	0	0.0%
Caucasian, 45-64	0	0.0%	0	0.0%	0	0.0%
Hawaiian/Other Pacific Islander, 45-64	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 45-64	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 45-64	0	0.0%	0	0.0%	0	0.0%
Unknown, 45-64	0	0.0%	0	0.0%	0	0.0%
<b>45-64 Total</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
African American, 65+	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, 65+	0	0.0%	0	0.0%	0	0.0%
Asian, 65+	0	0.0%	0	0.0%	0	0.0%
Caucasian, 65+	0	0.0%	0	0.0%	0	0.0%
Hawaiian/Other Pacific Islander, 65+	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 65+	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 65+	0	0.0%	0	0.0%	0	0.0%
Unknown, 65+	0	0.0%	0	0.0%	0	0.0%
<b>65+ Total</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
<b>Total</b>	<b>13</b>	<b>100.0%</b>	<b>17</b>	<b>100.0%</b>	<b>21</b>	<b>100.0%</b>



**Provide narrative for analysis of program retention data.** *(Based on the data, provide a narrative of your analysis of retention. Indicate factors that may have affected your retention. State any changes you plan to make to improve retention.)*

Many AE students elect to transfer prior to graduation to being in specific courses such as architectural engineering, mechanical engineering, biomedical engineering that are beyond the scope of an associate degree. At WCC we focus on transfer advisement to assist students with as many courses as possible that will transfer to the institution of their choice. With the movement of these students to AS, advisors will recommend specific electives in Math and Science as noted above.

**Identify Retention Action Items**

<b>Item</b>	<b>Action Items</b> <i>(What actions can be taken to increase program retention?)</i>	<b>Assessment of Action Items</b> <i>(How will you assess the results of action items?)</i>
1	NA (See retention items from Associate in Science degree.)	NA

**Outcome #3: Completers (unduplicated) (Degree level, highest level of attainment)**

**Baseline:** 7 # (Average of total completers for the last three years – 2019-20; 2020-21; 2021-22)  
**Standard:** NA  
**Target:** NA

We do plan to either graduate or teach out any students that remain in the AE program. Therefore, we do expect to have at least 7 or 8 more completers within the next academic year. *The low enrollment in AE and the lack of a full-time faculty have forced WCC to move toward dissolving this degree offering.*

<b>Number of Completers (unduplicated) – Graduation Year – Summer, Fall, Spring</b>	
<b>Graduation Year</b>	<b>Total Completers</b>
2019-2020	1
2020-2021	9
2021-2022	10

**Completers by Ethnicity, Gender, and Age**

Ethnicity & Gender	2019-2020		2020-2021		2021-2022	
	N	%	N	%	N	%
African American, Female	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, Female	0	0.0%	0	0.0%	0	0.0%
Asian, Female	0	0.0%	0	0.0%	1	10.0%
Caucasian, Female	0	0.0%	1	11.1%	0	0.0%
Hawaiian/Other Pacific Islander, Female	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, Female	0	0.0%	0	0.0%	0	0.0%
Two or More Races, Female	0	0.0%	0	0.0%	0	0.0%
Unknown, Female	0	0.0%	0	0.0%	0	0.0%
<b>Female Total</b>	<b>0</b>	<b>0.0%</b>	<b>1</b>	<b>11.1%</b>	<b>1</b>	<b>10.0%</b>
African American, Male	0	0.0%	0	0.0%	2	20.0%
American Indian/Alaskan Native, Male	0	0.0%	0	0.0%	0	0.0%
Asian, Male	0	0.0%	0	0.0%	1	10.0%
Caucasian, Male	0	0.0%	8	88.9%	5	50.0%
Hawaiian/Other Pacific Islander, Male	1	100.0%	0	0.0%	0	0.0%
Hispanic/Latino, Male	0	0.0%	0	0.0%	1	10.0%
Two or More Races, Male	0	0.0%	0	0.0%	0	0.0%
Unknown, Male	0	0.0%	0	0.0%	0	0.0%
<b>Male Total</b>	<b>1</b>	<b>100.0%</b>	<b>8</b>	<b>88.9%</b>	<b>9</b>	<b>90.0%</b>
<b>Total</b>	<b>1</b>	<b>100.0%</b>	<b>9</b>	<b>100.0%</b>	<b>10</b>	<b>100.0%</b>

Ethnicity & Age Range Table	2019-2020		2020-2021		2021-2022	
	N	%	N	%	N	%
African American, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Asian, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Caucasian, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Hawaiian/Other Pacific Islander, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Two or More Races, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
Unknown, Under the age of 18	0	0.0%	0	0.0%	0	0.0%
<b>Under the age of 18 Total</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
African American, 18-24	0	0.0%	0	0.0%	2	20.0%
American Indian/Alaskan Native, 18-24	0	0.0%	0	0.0%	0	0.0%
Asian, 18-24	0	0.0%	0	0.0%	2	20.0%
Caucasian, 18-24	0	0.0%	7	77.8%	5	50.0%
Hawaiian/Other Pacific Islander, 18-24	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 18-24	1	100.0%	0	0.0%	1	10.0%
Two or More Races, 18-24	0	0.0%	0	0.0%	0	0.0%
Unknown, 18-24	0	0.0%	0	0.0%	0	0.0%
<b>18-24 Total</b>	<b>1</b>	<b>100.0%</b>	<b>7</b>	<b>77.8%</b>	<b>10</b>	<b>100.0%</b>
African American, 25-44	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, 25-44	0	0.0%	0	0.0%	0	0.0%
Asian, 25-44	0	0.0%	0	0.0%	0	0.0%
Caucasian, 25-44	0	0.0%	2	22.2%	0	0.0%
Hawaiian/Other Pacific Islander, 25-44	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 25-44	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 25-44	0	0.0%	0	0.0%	0	0.0%
Unknown, 25-44	0	0.0%	0	0.0%	0	0.0%
<b>25-44 Total</b>	<b>0</b>	<b>0.0%</b>	<b>2</b>	<b>22.2%</b>	<b>0</b>	<b>0.0%</b>
African American, 45-64	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, 45-64	0	0.0%	0	0.0%	0	0.0%
Asian, 45-64	0	0.0%	0	0.0%	0	0.0%
Caucasian, 45-64	0	0.0%	0	0.0%	0	0.0%
Hawaiian/Other Pacific Islander, 45-64	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 45-64	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 45-64	0	0.0%	0	0.0%	0	0.0%
Unknown, 45-64	0	0.0%	0	0.0%	0	0.0%
<b>45-64 Total</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
African American, 65+	0	0.0%	0	0.0%	0	0.0%
American Indian/Alaskan Native, 65+	0	0.0%	0	0.0%	0	0.0%
Asian, 65+	0	0.0%	0	0.0%	0	0.0%
Caucasian, 65+	0	0.0%	0	0.0%	0	0.0%
Hawaiian/Other Pacific Islander, 65+	0	0.0%	0	0.0%	0	0.0%
Hispanic/Latino, 65+	0	0.0%	0	0.0%	0	0.0%
Two or More Races, 65+	0	0.0%	0	0.0%	0	0.0%
Unknown, 65+	0	0.0%	0	0.0%	0	0.0%
<b>65+ Total</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
<b>Total</b>	<b>1</b>	<b>100.0%</b>	<b>9</b>	<b>100.0%</b>	<b>10</b>	<b>100.0%</b>

**Provide narrative for analysis of completers.** *(Based on the data, provide a narrative of your analysis of completions. Indicate factors that may have affected your completions. How might you increase the number of completers in your program?)*

We do plan to either graduate or teach out any students that remain in the AE program. Therefore, we do expect to have at least 7 or 8 more completers within the next academic year.

The low enrollment in AE and the lack of a full-time faculty have forced WCC to move toward dissolving this degree offering and shifting students into the Associate of Science degree. Therefore, the number of completers will decrease in AE and increase in AS.

**Identify Completer Action Items**

<b>Item</b>	<b>Action Items</b> <i>(What actions can be taken to increase student completion in your program?)</i>	<b>Assessment of Action Items</b> <i>(How will you assess the results of action items?)</i>
1	NA (See items from Associate in Science degree.)	NA

### Section 3: Other Assessments

**Do you use other methods of assessment to evaluate the effectiveness of your program, to include surveys, self-assessments, student licensure/certification, or third-party credentials? If so, please explain how information collected from the(se) assessments can be used to improve the program.)**

An engineering program learning outcome assessment was done in EGR 220 and analyzed by the AE instructor in cooperation with selected math faculty. The findings are filed with the Institutional Effectiveness Office. A math program learning outcome assessment is done annually within the MAT 271 class with AE data disaggregated. This will continue under the AS program in MAT 171. We use these findings to develop action items for each assessment cycle that we implement to strengthen the program. Data is also used to determine weaknesses and opportunities for the program.

#### Planning Objectives (2019-20; 2020-21; 2021-22 – Fiscal Year, July 1-June 30)

Provide a summary of planning objectives submitted for the last three years, including the use of results of the planning objectives in the table provided.

#### Summary of Planning Objectives

Planning Year (Fiscal Year – July 1-June 30)	Objective(s) Submitted	Use of Results
2019-20	iWorx TA Psychological Physiology Teaching Kit	2019-20 Status Report: Submitted for purchase by Purchasing Director. Awaiting receipt. Unable to assess objective due to COVID campus shut-down, stay-at-home orders. Carry forward to the 2020-21 Plan to report assessment. 2021-22 Use of Results / Assessment: The iWorx kit has been received. However, it was not used in academic year 2021-22 as the course instructor continued to teach online due to Covid. The instructor hopes to return to the seated classroom in Fall 2022. Therefore, please carry forward to the 2022-23 Plan (or beyond) to report assessment. Carry forward to 2022-23 Plan to report assessment.
2020-21	No planning objectives submitted.	Not applicable.
2021-22	No planning objectives submitted.	Not applicable.

**What planning objectives (equipment, supplies, software, etc.) do you anticipate needing over the next three years? Justify the need.**

As viewed in the table above, the iWorx TA Psychological Physiology Teaching Kit will provide psychology instructors with the classroom tools needed to demonstrate many of the concepts they are learning. Using the observational/interactive learning model will give students hands on demonstrations in the areas of psychophysiology, psychobiology, conditioning, shaping, modeling, stimulus /response, sensory, memory, and many other psychological concepts. Students will be assessed through quizzes, tests, and essay assignments as well as observed abilities with instructor assisted experiments.

**What positions (faculty and/or staff) do you anticipate needing over the next three years? Justify the need.**

We do not anticipate advertising or hiring another engineering instructor full-time. Advertising for an adjunct will be done as needed. The faculty that teach AS and AA will also instruct our engineering pathway students.

**Provide narrative for your program facility needs over the next three years. If facilities are adequate, please confirm.**

Language & Communication Department

English faculty members may request computer lab classrooms in which to teach English 111.

Science Department

Lab space is at a premium and the lab spaces were not optimally designed. Holly 218 (lab used for General Chemistry II and Organic Chemistry) and Holly 217 (lab used for microbiology) are too small. New lab spaces for these courses are needed. Space is always an issue for Math and Science classes. The PHY lab is shared with another division.

Humanities, Fine Arts, and Social Sciences

This department houses most of its classes in the Azalea building. These classrooms are adequate. Economics frequently holds classes in the Spruce building due to lack of space in Azalea. Music and Art are housed in Dogwood building. The Music classes have adequate storage and space for their current needs, but as the AFA program grows, it will need more space. Art room is frequently filled. Office space for this department is at a premium with many faculty sharing offices in Azalea.

Math Department

The facilities for Math classes are somewhat adequate with faculty from this department teaching in several buildings on campus such as Dogwood, Spruce, Azalea, and Wayne Learning Center. The Math department only has two dedicated math classrooms on campus. It would be beneficial to have more dedicated Math classrooms that meet the board space, technology, and seating requirements. There are currently no designated classroom/labs for any of our EGR courses. Space is always an issue for Math and Science classes. The PHY lab is shared with another division and the MATH department always struggles to locate adequate rooms on campus that meet the technology and seating requirements.

**Provide narrative for academic / student support services needs over the next three years. (Are services adequate for your program/service?)**

The college transfer advising center is part of the college transfer division and supports the advising and registration of activities of students and faculty. The CTAC needs one additional advisor or full-time Administrative Assistant that can support students with advising and registration needs. The hours for testing in the Academic Testing Center need to be increased for student accessibility. Evening hours for placement testing, one night a week, are needed for increased student access. Additional tutors in math, science, foreign language, and social sciences are always needed. Financial aid, academic testing and tutoring, admissions and counseling services are provided in the Wayne Learning Center.

**Provide narrative for analysis of the program's / discipline's strengths, weaknesses, and opportunities.**

Strengths – Higher levels of mathematics courses are taught at WCC while many neighboring community colleges do not offer MAT 280, 273 or 285. WCC has a full-time faculty member for PHY 251 and 252. Each faculty member has a graduate degree and 18 graduate hours in their respective discipline. Our faculty members have a wide range of professional and/or educational experiences. In addition to their classroom expertise, our faculty involve themselves and our students in activities outside the classroom. From our students having artwork displayed at the North Carolina Legislative Building to student, faculty, staff, and community choir collaborations to science faculty participating in National Science Foundation activities, our faculty work hard to help our students meet their academic goals. Aside from our faculty, the Arts & Sciences Division (College Transfer) has tremendous partnerships with colleges and four-year universities. The partnerships include East Carolina University's "Pirate Promise," Fayetteville State University's "10K Degree Pathway", University of North Carolina Wilmington's "Pathway to Excellence Program", and the University of North Carolina Pembroke's "BraveStep" to name a few. Most recently the AE degree program partnered with East Carolina University's NSF grant opportunity "The PIRATES Program." PIRATES stands for Providing Inclusive Residential and Transfer Experience Scholarships. This program allows WCC to award five scholarships per year to first-time college students who have demonstrated financial need. These same students are also eligible to transfer to ECU and receive an additional \$10,000 in scholarships.

Weaknesses – Lack of availability of faculty with master's degrees including 18 semester hours in engineering in our community and our current salary range. Our salary range makes recruiting qualified instructors very difficult. Lack of classroom and lab space is also a weakness of this program.

Opportunities – More dedicated physical space for required courses and labs. Creating a Memo of Understanding (MOU) for shared faculty in EGR 150 with nearby community colleges could provide face-to-face instruction for our students. The S-Stem partnership could aid with this endeavor.

