



ELIZABETH CITY STATE UNIVERSITY

Curriculum Guide for

Bachelor of Science Degree: Engineering Technology (Mechanical Engineering Technology)

ASSOCIATE OF SCIENCE DEGREE: Universal General Education Transfer Component (UGETC)

First two years (Freshman and Sophomore) to be completed at community college.

<u>Community College Course #</u>	<u>Hours</u>	<u>Community College Course Title</u>	<u>Elizabeth City State University Equivalency</u>	<u>Hours</u>	<u>Comments</u>
<u>English Composition</u>	<u>6 SHC</u>	<i>The following two English composition courses are required.</i>			
ENG 111	3 SHC	Writing and Inquiry	ENGL 102 Eng. Comp & Grammar	3 SHC	Required by Major.
ENG 112	3 SHC	Writing/Research in the Disciplines	ENGL 103 Eng. Comp & Vocab.	3 SHC	Required by Major.
<u>Social/ Behavioral Science</u>	<u>6 SHC</u>	<i>Select three courses from the following from at least two different disciplines.</i>			
HIS 111	3 SHC	World Civilizations I	HIST 140 World Civ. I	3 SHC	Required by Major.
HIS 112	3 SHC	World Civilizations II	HIST 141 World Civ. II	3 SHC	Required by Major.
HIS 131	3 SHC	American History I	HIST 255 American History to 1877	3 SHC	
HIS 132	3 SHC	American History II	HIST 256 American History Since 1877	3 SHC	

ECO 251 ECO 252 POL 120	3 SHC 3 SHC 3 SHC	Principles of Microeconomics Principles of Macroeconomics American Government	ECON 201 Prin. of Econ. I ECON 202 Prin. of Econ. II POLS 298 American National Government	3 SHC 3 SHC 3 SHC	Preferred by Major.
PSY 150 SOC 210	3 SHC 3 SHC	General Psychology Intro to Sociology	PSY 212 General Psychology SOC 201 Intro to Sociology	3 SHC 3 SHC	Preferred by Major.
Humanities/Fine Arts	6 SHC	<i>Select two courses from the following from at least two different disciplines.</i>			
<u>Communications</u> COM 231	3 SHC	Public Speaking	SPCH 314 Public Speaking	3 SHC	Required by Major.
<u>Humanities/Fine Arts</u> ART 111 ART 114 ART 115	3 SHC 3 SHC 3 SHC	Art Appreciation Art History Survey I Art History Survey II	ART 130 Art Appreciation	2 SHC	Required by Major. (Take either ART 111 or MUS 110) 1 hr. used as an elective.
ENG 231 ENG 232	3 SHC 3 SHC	American Literature I American Literature II	ENGL 201 World Literature I ENGL 202 World Literature II	3 SHC 3 SHC	Required by Major. Required by Major.
MUS 110 MUS 112	3 SHC 3 SHC	Music Appreciation Introduction to Jazz	MUS 135 Intro to Music	2 SHC	Required by Major. (Take either ART 111 or MUS 110) 1 hr. used as an elective.
PHI 215 PHI 240	3 SHC 3 SHC	Philosophical Issues Introduction to Ethics	Social/Behavioral Science Elective	3 SHC	
Mathematics	8 SHC	<i>Select two courses from the following:</i>			
MAT 171	4 SHC	Pre-calculus Algebra	MATH 115 College Algebra	3 SHC	Elective.
MAT 172	4 SHC	Pre-calculus Trigonometry	MATH 118 Pre-calculus	3 SHC	Required by Major.
MATH 263	4 SHC	Brief Calculus	MATH 153 Applied Calculus	3 SHC	
MATH 271	4 SHC	Calculus I	MATH 165 Calculus in Single Variable	4 SHC	Required by Major.

Natural Sciences	8 SHC	<i>Select 8 SHC from the following courses:</i>			Note: Biology, Chemistry, and Physics courses must be taken in sequence.
BIO 110	4 SHC	Principles of Biology	BIOL 155/155L Principles of Biological Science/Lab	4 SHC	
BIO 111	4 SHC	General Biology I	BIOL 101/L General Bio. I	4 SHC	
BIO 112	4 SHC	General Biology II	BIOL 102/L General Bio II	4 SHC	
GEL 111	4 SHC	Introduction to Geology	Natural Science Elective	4 SHC	
PHY 110 and PHY 110A	3 SHC and 1 SHC	Conceptual Physics and Conceptual Physics Lab	PHYS 182/182L General Physics II/Lab	4 SHC	
PHY 151 and PHY 152	4 SHC and 4 SHC	College Physics I and College Physics II	PHYS 191/Lab University Physics I and PHYS 192/Lab University Physics II	4 SHC and 4 SHC	Required by Major.
PHY 251 and PHY 252	4 SHC and 4 SHC	General Physics I and General Physics II	PHYS 182/182L General Physics II/Lab	4 SHC	
CHM 151	4 SHC	General Chemistry I	CHEM 101 and 101L General Chemistry/Lab	4 SHC	Required by Major.
Total UGETC Hours	<u>34</u> SHC				
Additional GE Courses	<u>14</u> SHC				
CIS 115	3 SHC	Introduction to Prog. And Logic	CSC 115 Programming I	3 SHC	Required by Major.
MAT 271	4 SHC	Calculus I	MATH 165 Calculus I	4 SHC	Required by Major.
MAT 272	4 SHC	Calculus II	MATH 265 Calculus II	4 SHC	Required by Major.
ENG 231	3 SHC	American Lit. I	ENGL 201 World Lit. I	3 SHC	Required by Major.
Total General Education Hours Required	<u>48</u> SHC				

<u>Other Required Hours</u>	<u>15-16 SHC</u>				
PE	2 SHC	Physical Activity	Physical Activity	2 SHC	Required by Major.
HEA 110	3 SHC	Personal Health and Wellness	HLTH 185 Health Concepts	2 SHC	Required by Major.
CIS 110	3 SHC	Intro to computers	ENGT 100/100L Intro. To Engineering Tech/Lab	4 SHC	Required by Major.
EGR 131	2 SHC	Intro to Electronics Tech			
ELN 133	4 SHC	Digital Electronic	Elective	4 SHC	Elective
MAT 273 or Other Science Class	4 SHC	Calculus III	MATH 267 Calculus of Several Variables III	4 SHC	Elective.
<u>Academic Transition</u>	<u>1 SHC</u>	<i>The following course is required.</i>			
ACA 122	1 SHC	College Transfer Course	UNIV 110 Freshman Seminar	1 SHC	Required by Major.
<i>Total Semester Hours in Program</i>	<u>60-61 SHC</u>				

The Junior and Senior years will be completed at Elizabeth City State University.

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			<i>Semester 5: (17 credit hours)</i>		
			ENGT 205/205L Circuit Analysis/Lab	4 SHC	Major Requirement.
			ENGT 220 Instrumentation and Measurements	3 SHC	Major Requirement.
			ENGT 401 Technical Writing	3 SHC	Major Requirement.
			ENGT 310/310L Applied Mechanics/Lab	4 SHC	Major Requirement.
			Elective	3 SHC	Major Elective.
			<i>Semester 6: (17 credit hours)</i>		
			ENGT 210/210L Materials & Processes/ Lab	4 SHC	Major Requirement.
			ENGT 320 Applied Fluid Mechanics	3 SHC	Major Requirement.
			ENGT 385 Strength of Materials	3 SHC	Major Requirement.
			ENGT 105 CAD I	3 SHC	Major Requirement.
			ENGT 235/235L Analog and Digital Circuits I/Lab	4 SHC	Major Requirement.

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			<i>Semester 7: (15 credit hours)</i>		
			ENGT 415 Machine Design	3 SHC	Major Requirement.
			ENGT 420 Thermal Systems	3 SHC	Major Requirement.
			ENGT 425 Thermal & Fluid Lab	1 SHC	Major Requirement.
			ENGT 455 Senior Project I	2 SHC	Major Requirement.
			ENGT 370 Computer Aided Design and Manufacturing	3 SHC	Major Requirement.
			ENGT 245 Intro. To LAN and WAN technology	3 SHC	Major Requirement.
			<i>Semester (15 credit hours)</i>		
			ENGT 460 Eng. Software Applications	3 SHC	Major Requirement.
			ENGT 499 Senior Project II	2 SHC	Major Requirement.
			ENGT 360/360L Control Systems/Lab	4 SHC	Major Requirement.
			MNGT 421 Operations Management	3 SHC	Major Requirement.
			Elective	3 SHC	Major Elective.
			<i>Total ECSU Semester Credit Hours Completed</i>	<i>64 SHC</i>	

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			<i>Total Semester Credit Hours Completed for Degree</i>	<i>120 SHC</i>	
			Reviewed by: ECSU – Dr. Akbar Eslami		Approved 2-2-2018