

# Alamance Community College

## 2021 Calendar Year

### Mechanical Engineering Technology Basic Certificate

The Mechanical Engineering Certificate program option includes 13 credit hours (23 contact hours) of coursework. Students will receive in introduction to computer aided design, programmable logic controllers and machining applications. This option allows students to explore the career path while evaluating career options. While not required, students should have a working knowledge of drafting techniques and standards prior to entering this program. Additionally, students use acquired skills to complete individual class projects. Graduates with this certificate will have a basic knowledge of solid modeling, PLC uses and machining techniques.

#### Course and Hour Requirements

Course Number	Course TITLE	Contact Hours	Credit Hours
DFT-151	CAD I	5	3
DFT-154	Intro to Solid Modeling	5	3
MAC-141	Machining Applications I	8	4
ELC-128	Introduction to Programmable Logic Controller	5	3
	<b>Semester Total</b>	<b>23</b>	<b>13</b>

# Mechanical Engineering Technology Certificate

The Mechanical Engineering Certificate program option includes 16 credit hours (24 contact hours) of coursework. Students will receive an introduction to mechanical engineering applications, allowing them to utilize mathematical analysis techniques to determine how stresses react within mechanical components. This option allows students to explore the career path while evaluating career possibilities. While not required, students should have a working knowledge of drafting techniques and standards as well as SolidWorks prior to entering this program. Additionally, students use acquired skills to complete individual class projects. Graduates with this certificate will have a basic knowledge mechanical engineering.

## Course and Hour Requirements

Course Number	Course TITLE	Contact Hours	Credit Hours
EGR-150	Intro to Engineering	3	2
MEC-145	Manufacturing Materials I	5	3
MEC-265	Fluid Mechanics	4	3
EGR-250	Statics/Strength of Mater	7	5
MEC-260	Fundamentals of Machine Design	5	3
	<b>Semester Total</b>	<b>24</b>	<b>16</b>

# Mechanical Engineering Technology Quality Control Certificate

The Mechanical Engineering Quality Control Certificate program option includes 12 credit hours (21 contact hours) of coursework. Students will receive in introduction to computer aided design, programmable logic controllers and machining applications. This option allows students to explore a quality control career path. Additionally, students use acquired skills to complete individual class projects. Graduates with this certificate will have a basic knowledge of quality control and manufacturing materials and can qualify for a position of quality control tech.

## Course and Hour Requirements

Course Number	Course TITLE	Contact Hours	Credit Hours
BPR-111	Print Reading	3	2
MAC-141	Machining Applications I	8	4
ISC-132	Manufacturing Quality Control	5	3
MEC-145	Manufacturing Materials I	5	3
	<b>Semester Total</b>	<b>21</b>	<b>12</b>