



ASSOCIATE OF APPLIED SCIENCE

**MECHANICAL ENGINEERING TECHNOLOGY –  
FUEL CELL MAJOR**

*The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.*

2021 Catalog  
Effective Summer 2020

**4051**

Engineering Technologies Division

Engineering Technology Department

TECHNICAL Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
MET124	Statics and Strength of Materials	4	Pre-Co-PHY121 <b>or</b> Pre Co-PHY221	
MET229	Introduction to Alternative and Renewable Energy/Fuel Cells	3		
MET228	Machine Design	4	MET124	
MET225 <b>or</b> AIT122	Manufacturing Processes <b>or</b> Machine Tools	3 <b>or</b> 4		
MET230	Analysis/Applications of Fuel Cells	3	MET229	
MET231	Fuel Cell Systems	3	MET230	
MET227	Thermodynamics and Heat Transfer	3	PHY121	
MET232	Fuel Cell Project	3	MET231	
DET230	AutoCAD Inventor with 3D Printing and Scanning	3	DET125	
EST230	Electrical Circuits and Devices <sup>^</sup>	4	(MTH025 or Proficiency) <b>or</b> MTH107	
<b>Total</b>		<b>33-34</b>		
NON-TECH Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
SSC101	Student Success Seminar <sup>^^</sup>	1	<i>Take first semester</i>	
CSE122	Programming Logic and Problem Solving <sup>^</sup>	3	(IDS102 or Proficiency) <b>and</b> (ITD100 or Proficiency)	
DET125	Basic AutoCAD	3		
MTH135	Precalculus <sup>^</sup> – <i>A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.</i>	5	MTH025 <b>or</b> Proficiency	
PHY121	College Physics I with Algebra (lab) <sup>^</sup>	4	MTH135 <b>or</b> (MTH125 and MTH130) <b>or</b> Proficiency	
CHM141	General Chemistry I (lab) <sup>▲</sup>	5	(CHM101 <b>or</b> Proficiency) <b>or</b> (MTH024 <b>or</b> MTH025 <b>or</b> Proficiency)	
ENG124	College Composition <sup>^</sup>	3	Co-ENG024 <b>or</b> Co- ENG011 <b>or</b> Proficiency	
ENG221	Technical Report Writing	3	ENG124	
	<i>Select one (1) Arts &amp; Humanities Elective<sup>1</sup></i>	3	<i>Check for prerequisites</i>	
<b>Total</b>		<b>30</b>		
<b>TOTAL CREDIT HOURS</b>		<b>63-64</b>		

<sup>^</sup>Based on SSC placement scores

<sup>^^</sup>To promote student success, this course should be taken in the first semester

<sup>▲</sup>Because of strong emphasis on science in this major, applicants must have successfully completed Chemistry and Biology in high school. Students who did not complete the courses in high school, and those who prefer to refresh their knowledge of the material, should complete the listed pre-requisites.

<sup>1</sup>Arts & Humanities Electives: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, PHL122

FULL-TIME STUDENT ADVISING NOTES

Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

Course Sequence

The semester-by-semester listing below provides the normal scheduling option for full-time associate degree students who plan to finish in two years.

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar^^	1	<i>Take first semester</i>
MET229	Introduction to Alternative and Renewable Energy/Fuel Cells	3	
CHM141	General Chemistry I (lab)▲	5	(CHM101 <b>or</b> Proficiency) <b>or</b> (MTH024 <b>or</b> MTH025 <b>or</b> Proficiency)
MTH135	Precalculus^ – <i>A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.</i>	5	MTH025 <b>or</b> Proficiency
ENG124	College Composition^	3	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency
DET125	Basic AutoCAD	<u>3</u>	
		<b>20</b>	
<u>Second Semester</u>			
MET124	Statics and Strength of Materials	4	Pre-Co-PHY121 <b>or</b> Pre-Co-PHY221
MET230	Analysis/Applications of Fuel Cells	3	MET229
CSE122	Programming Logic and Problem Solving^	3	(IDS102 <b>or</b> Proficiency)
PHY121	College Physics I with Algebra (lab)^	<u>4</u>	<b>and</b> (ITD100 <b>or</b> Proficiency) MTH135 <b>or</b> (MTH125 and MTH130) <b>or</b> Proficiency
		<b>14</b>	
<u>Third Semester</u>			
MET228	Machine Design	4	MET124
MET231	Fuel Cell Systems	3	MET230
DET230	AutoCAD Inventor with 3D Printing and Scanning	3	DET125
EST230	Electrical Circuits and Devices^	<u>4</u>	(MTH025 <b>or</b> Proficiency) <b>or</b> MTH107
		<b>14</b>	
<u>Fourth Semester</u>			
MET227	Thermodynamics and Heat Transfer	3	PHY121
MET232	Fuel Cell Project	3	MET231
ENG221	Technical Report Writing	3	ENG124
MET225	Manufacturing Processes	3	
<b>or</b>	<b>or</b>	<b>or</b>	
AIT122	Machine Tools	4	
<i>Arts &amp; Humanities Elective<sup>l</sup></i>		<u>3</u>	<i>Check for prerequisites</i>
		<b>15-16</b>	
	<b>TOTAL CREDITS</b>	<b>63-64</b>	

^Based on SSC placement scores

^^To promote student success, this course should be taken in the first semester

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^Arts & Humanities Electives: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, PHL122