



**ASSOCIATE OF APPLIED SCIENCE**  
**INDUSTRIAL PROCESS OPERATION**  
**TECHNOLOGY**

*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

**4312**

*Engineering Technologies Division*

*Oil and Gas Technology Department*

<b>TECHNICAL Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre- and Co-Requisites</b>	<b>Completed Sem./Year</b>
EST230	Electrical Circuits and Devices <sup>^</sup>	4	(MTH025 or Proficiency) or MTH107	
MST221	Mechanical Drive Components	3		
PET132	Petroleum Instrumentation	3		
ARL234	Gas Compression and Flow Dynamics	3		
ARL239	Large Line Unit Compressor Assembly	3		
EET227	PLCs and Industrial Controls I	3	EET120 or EST230	
EET228	PLCs and Industrial Controls II	3	EET227	
PET102	Introduction to Supervisory Control and Data Acquisition (SCADA)	2		
MST134	Hydraulic and Pneumatic Systems <sup>^</sup>	6	MTH022 or MTH023 or Proficiency	
	<b>Total</b>	<b>30</b>		
<b>NON-TECH Course Number</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre- and Co-Requisites</b>	<b>Completed Sem./Year</b>
SSC101	Student Success Seminar <sup>^^</sup>	1	<i>Take first semester</i>	
PET101	Introduction to the Petroleum Industry	3		
ITD122	Computer Applications for Professionals <sup>^</sup>	3	ITD100 or Proficiency	
CHM101	Introduction to Chemistry <sup>^▲</sup>	4	(MTH022 or MTH023 or Proficiency) or MTH105 or MTH107	
MTH107 or MTH125	Industrial Math <sup>^</sup> or College Algebra <sup>^Ω</sup>	3 or 4	<i>Check for prerequisites</i>	
ENG124	College Composition <sup>^</sup>	3	Co-ENG024 or Co-ENG011 or Proficiency	
ENV221	OSHA 40-Hour HAZWOPER	2		
COM121 or COM122 or COM123	Effective Speaking or Interpersonal Communication or Small Group Communication <sup>^</sup>	3 or 3 or 3	IDS102 or Proficiency	
MST121 or DET125	Blueprint Reading or Basic AutoCAD	2 or 3		
MST125	Basic Pumps	3		
	<i>Select one (1) Social &amp; Behavioral Sciences or Arts &amp; Humanities Elective from the list below<sup>l</sup></i>	3		
	<b>Total</b>	<b>30-32</b>		
	<b>TOTAL CREDIT HOURS</b>	<b>60-62</b>		

See footnotes on next page.

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PART-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 part-time associate degree students who plan to finish in eight semesters.

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar^^	1	
MTH107	Industrial Math^	3	<i>Take first semester</i>
<b>or</b>	<b>or</b>	<b>or</b>	<i>Check for prerequisites</i>
MTH125	College Algebra^Ω	4	
PET101	Introduction to the Petroleum Industry	<u>3</u>	
		<b>7-8</b>	
<u>Second Semester</u>			
PET102	Introduction to Supervisory Control and Data Acquisition (SCADA)	2	
EST230	Electrical Circuits and Devices^	<u>4</u>	(MTH025 or Proficiency) <b>or</b> MTH107
		<b>6</b>	
<u>Third Semester</u>			
ARL234	Gas Compression and Flow Dynamics	3	
EET227	PLCs and Industrial Controls I	<u>3</u>	EET120 <b>or</b> EST230
		<b>6</b>	
<u>Fourth Semester</u>			
MST134	Hydraulic and Pneumatic Systems^	6	MTH022 <b>or</b> MTH023 <b>or</b> Proficiency
EET228	PLCs and Industrial Controls II	<u>3</u>	EET227
		<b>9</b>	
<u>Fifth Semester</u>			
MST221	Mechanical Drive Components	3	
ARL239	Large Line Unit Compressor Assembly	<u>3</u>	
		<b>6</b>	
<u>Sixth Semester</u>			
ENG124	College Composition^	3	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency
CHM101	Introduction to Chemistry^▲	4	(MTH022 or MTH023 or Proficiency) <b>or</b> MTH105
ENV221	OSHA 40-Hour HAZWOPER	<u>2</u>	<b>or</b> MTH107
		<b>9</b>	
<u>Seventh Semester</u>			
ITD122	Computer Applications for Professionals^	3	ITD100 <b>or</b> Proficiency
MST125	Basic Pumps	3	
PET132	Petroleum Instrumentation	<u>3</u>	
		<b>9</b>	
<u>Eighth Semester</u>			
COM121	Effective Speaking	3	
<b>or</b>	<b>or</b>	<b>or</b>	
COM122	Interpersonal Communication	3	
<b>or</b>	<b>or</b>	<b>or</b>	
COM123	Small Group Communication^	3	IDS102 <b>or</b> Proficiency
MST121	Blueprint Reading	2	
<b>or</b>	<b>or</b>	<b>or</b>	
DET125	Basic AutoCAD	3	
	<i>Select one (1) Social &amp; Behavioral Sciences or Arts &amp; Humanities Elective from the list below<sup>l</sup></i>	<u>3</u>	<i>Check for prerequisites</i>
		<b>8-9</b>	
	<b>TOTAL CREDITS</b>	<b>60- 62</b>	

^Based on SSC placement scores

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

▲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.

ΩMTH125 should only be taken by students planning to transfer to a four-year institution

<sup>l</sup>Social & Behavioral Sciences or Arts & Humanities electives: BUS122, BUS221, BUS222, ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, HIS221, HIS222, PHL122 (recommended), PSC121, PSY121, PSY123, PSY124, PSY220, PSY221, SOC121, SOC122, SOC123, SOC221, SOC225