

 	<p align="center"><b>ASSOCIATE OF APPLIED SCIENCE</b></p> <p align="center"><b>MEASUREMENT &amp; MECHATRONICS TECHNOLOGY</b></p> <p align="center"><i>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.</i></p>	<b>2023-24 Catalog</b> Effective Summer 2023
		<b>4337</b>

*Business, Engineering, and Information Technologies Division*
*CDL, Energy, and Environmental Technology Department*

TECHNICAL Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
PET132	Petroleum Instrumentation	3		
MST221	Mechanical Drive Components	3		
EST230	Electrical Circuits and Devices <sup>^</sup>	4	(MTH025 or Proficiency) <b>or</b> MTH107	
PET210	Petroleum Process Controls	3		
EET227	PLCs and Industrial Controls I	3	EET120 <b>or</b> EST230	
PET102	Introduction to Supervisory Control and Data Acquisition (SCADA)	2		
PET131	Corrosion Basics	3		
PET135	Measurement and Basic Pipeline Operations	3		
PET141	Production Operations	3		
AET121 <b>or</b> ETD224	Sustainable/AET Sources <b>or</b> Engineering Co-op	3 <b>or</b> 4		
	<b>Total</b>	<b>30-31</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>	
PET101	Introduction to the Petroleum Industry	3		
ARL234	Gas Compression and Flow Dynamics	3		
ITD122	Computer Applications for Professionals <sup>^</sup>	3	ITD100 <b>or</b> Proficiency	
CHM101	Introduction to Chemistry <sup>^</sup> <sup>▲</sup>	4	(MTH022 or MTH023 or Proficiency) <b>or</b> MTH105 <b>or</b> MTH107	
MTH107 <b>or</b> MTH125	Industrial Math <sup>^</sup> <b>or</b> College Algebra <sup>^</sup> <sup>Ω</sup>	3 <b>or</b> 4	<i>Check for prerequisites</i>	
ENG124	College Composition <sup>^</sup>	3	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency	
ENV221	OSHA 40-Hour HAZWOPER	2		
COM121 <b>or</b> COM122 <b>or</b> COM123	Effective Speaking <b>or</b> Interpersonal Communication <b>or</b> Small Group Communication <sup>^</sup>	3 <b>or</b> 3 <b>or</b> 3	IDS102 <b>or</b> Proficiency	
MST121 <b>or</b> DET125	Blueprint Reading <b>or</b> Basic AutoCAD	2 <b>or</b> 3		
<i>Select one (1) Social &amp; Behavioral Sciences or Arts &amp; Humanities Elective from the list below<sup>1</sup></i>		3	<i>Check for prerequisites</i>	
	<b>Total</b>	<b>30-32</b>		
	<b>TOTAL CREDIT HOURS</b>	<b>60-63</b>		

See footnotes on next page.

## 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>
ENG124	College Composition^	3	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency
PET101	Introduction to the Petroleum Industry	3	
ARL234	Gas Compression and Flow Dynamics	3	
MTH107	Industrial Math^	3	
<b>or</b>	<b>or</b>	<b>or</b>	<i>Check for prerequisites</i>
MTH125	College Algebra^Ω	4	
ITD122	Computer Applications for Professionals^	3	ITD100 <b>or</b> Proficiency
		<b>16-17</b>	
<u>Second Semester</u>			
EST230	Electrical Circuits and Devices^	4	(MTH025 or Proficiency) <b>or</b> MTH107
PET102	Introduction to Supervisory Control and Data Acquisition (SCADA)	2	
PET131	Corrosion Basics	3	
PET135	Measurement and Basic Pipeline Operations	3	
PET210	Petroleum Process Controls	3	
		<b>15</b>	
<u>Third Semester</u>			
EET227	PLCs and Industrial Controls I	3	EET120 or EST230
PET132	Petroleum Instrumentation	3	
PET141	Production Operations	3	
MST121	Blueprint Reading	2	
<b>or</b>	<b>or</b>	<b>or</b>	
DET125	Basic AutoCAD	3	
AET121	Sustainable/AET Sources	3	
<b>or</b>	<b>or</b>	<b>or</b>	
ETD224	Engineering Co-op	4	
		<b>14-16</b>	
<u>Fourth Semester</u>			
MST221	Mechanical Drive Components	3	
CHM101	Introduction to Chemistry^▲	4	(MTH022 or MTH023 or Proficiency) <b>or</b> MTH105 <b>or</b> MTH107
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
ENV221	OSHA 40-Hour HAZWOPER	2	
<i>Select one (1) Social &amp; Behavioral Sciences or Arts &amp; Humanities Elective from the list below<sup>1</sup></i>		3	<i>Check for prerequisites</i>
		<b>15</b>	
	<b>TOTAL CREDITS</b>	<b>60-63</b>	

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

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

<sup>Ω</sup>MTH125 should be taken by students planning to transfer to a four-year institution

<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>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