



**ASSOCIATE OF APPLIED SCIENCE**  
**PETROLEUM TECHNOLOGY –**  
**INSTRUMENTATION ELECTRONICS**  
**TECHNICIAN MAJOR**

**1718 Catalog**  
 Effective Summer 2017

**4326**

*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. 3357:15-13-06.*

*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	[(MTH093 and MTH094) <b>or</b> Proficiency] <b>or</b> MTH107	
MST221	Mechanical Drive Components	3		
PET132	Petroleum Instrumentation	3	EST230 <b>and</b> (CHM101 <b>or</b> ARL234)	
EET227	PLCs and Industrial Controls I	3	EET120 <b>or</b> EST230	
EET228	PLCs and Industrial Controls II	3	EET227	
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		
PET142	Artificial Lift	3		
	<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		
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>	4	(MTH093 and MTH094) <b>or</b> Proficiency	
MTH107 <b>or</b> MTH125	Industrial Math <sup>^</sup> <b>or</b> College Algebra <sup>^ Ω</sup>	3 <b>or</b> 4	(MTH091 and MTH092) <b>or</b> Proficiency (MTH093 and MTH094) <b>or</b> Proficiency	
ENG124	College Composition <sup>^</sup>	3	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<sup>1</sup></i>	3	<i>Check for prerequisites</i>	
	<b>Total</b>	<b>30-32</b>		
<b>TOTAL CREDIT HOURS</b>		<b>60-62</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, PSY122, PSY123, PSY124, PSY220, PSY221, SOC121, SOC122, SOC123, SOC221, SOC225

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### 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>
MST221	Mechanical Drive Components	3	
PET101	Introduction to the Petroleum Industry	3	
PET102	Introduction to Supervisory Control and Data Acquisition (SCADA)	2	
EST230	Electrical Circuits and Devices^	4	[(MTH093 and MTH094) or Proficiency] <b>or</b> MTH107
MST121	Blueprint Reading	2	
<b>or</b>	<b>or</b>	<b>or</b>	
DET125	Basic AutoCAD	<u>3</u>	
		<b>15-16</b>	
<u>Second Semester</u>			
ARL234	Gas Compression and Flow Dynamics	3	
PET131	Corrosion Basics	3	
PET135	Measurement and Basic Pipeline Operations	3	
PET141	Production Operations	3	
PET142	Artificial Lift	<u>3</u>	
		<b>15</b>	
<u>Third Semester</u>			
EET227	PLCs and Industrial Controls I	3	EET120 <b>or</b> EST230
ITD122	Computer Applications for Professionals^	3	ITD100 <b>or</b> Proficiency
CHM101	Introduction to Chemistry^▲	4	(MTH093 and MTH094) <b>or</b> Proficiency
MTH107	Industrial Math^	3	(MTH091 and MTH092) <b>or</b> Proficiency
<b>or</b>	<b>or</b>	<b>or</b>	(MTH093 and MTH094) <b>or</b> Proficiency
MTH125	College Algebra^ Ω	4	<b>or</b> Proficiency
ENG124	College Composition^	<u>3</u>	ENG011 <b>or</b> Proficiency
		<b>16-17</b>	
<u>Fourth Semester</u>			
EET228	PLCs and Industrial Controls II	3	EET227
PET132	Petroleum Instrumentation	3	EST230 <b>and</b> (CHM101 or ARL234)
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>	<u>3</u>	<i>Check for prerequisites</i>
		<b>14</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

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

▲ 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, PSC121, PSY121, PSY122, PSY123, PSY124, PSY220, PSY221, SOC121, SOC122, SOC123, SOC221, SOC225, ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, HIS221, HIS222, PHL122 (recommended)