



ASSOCIATE OF APPLIED SCIENCE
PETROLEUM TECHNOLOGY - MEASUREMENT & MECHATRONICS TECHNICIAN 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.

1920 Catalog

Effective Summer 2019

4337

Engineering Technologies Division

Oil and Gas Technology Department

TECHNICAL Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
PET132	Petroleum Instrumentation	3	EST230 and (CHM101 or ARL234)	
MST221	Mechanical Drive Components	3		
EST230	Electrical Circuits and Devices [^]	4	[(MTH093 and MTH094) or Proficiency] or MTH107	
PET210	Petroleum Process Controls	3		
EET227	PLCs and Industrial Controls I	3	EET120 or 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		
PET230 or ETD224	Petroleum Measurement Capstone or Engineering Co-op	3 or 4	PET102, PET131, PET135, Pre-Co-PET141, Pre-Co-PET210	
	Total	30-31		
NON-TECH Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
SSC101	Student Success Seminar ^{^^}	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 [^]	3	ITD100 or Proficiency	
CHM101	Introduction to Chemistry [^] [▲]	4	(MTH093 or MTH025 or Proficiency) or MTH105 or MTH106 or MTH107	
MTH107 or MTH125	Industrial Math [^] or College Algebra ^{^Ω}	3 or 4	<i>Check for prerequisites</i>	
ENG124	College Composition [^]	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 [^]	3 or 3 or 3	IDS102 or Proficiency	
MST121 or DET125	Blueprint Reading or Basic AutoCAD	2 or 3		
<i>Select one (1) Social & Behavioral Sciences or Arts & Humanities Elective from the list below^l</i>		3	<i>Check for prerequisites</i>	
	Total	30-32		
TOTAL CREDIT HOURS		60-63		

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 or Co-ENG011 or Proficiency
PET101	Introduction to the Petroleum Industry	3	
ARL234	Gas Compression and Flow Dynamics	3	
EST230	Electrical Circuits and Devices^	4	[(MTH093 and MTH094) or Proficiency]
ITD122	Computer Applications for Professionals^	3	or MTH107
		17	ITD100 or Proficiency
<u>Second Semester</u>	<u>10 Week Summer Intensive</u>		
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	
PET210	Petroleum Process Controls	3	
		14	
<u>Third Semester</u>			
EET227	PLCs and Industrial Controls I	3	EET120 or EST230
PET132	Petroleum Instrumentation	3	EST230 and (CHM101 or ARL234)
MST221	Mechanical Drive Components	3	
MST121	Blueprint Reading	2	
or	or	or	
DET125	Basic AutoCAD	3	
PET230	Petroleum Measurement Capstone	3	PET102, PET131, PET135, Pre-Co-
or	or	or	PET141, Pre-Co-PET210
ETD224	Engineering Co-op	4	
		14-16	
<u>Fourth Semester</u>			
MTH107	Industrial Math^	3	
or	or	or	<i>Check for prerequisites</i>
MTH125	College Algebra^Ω	4	
CHM101	Introduction to Chemistry^▲	4	(MTH093 or MTH025 or Proficiency) or MTH105 or MTH106 or MTH107
COM121	Effective Speaking	3	
or	or	or	
COM122	Interpersonal Communication	3	
or	or	or	
COM123	Small Group Communication^	3	IDS102 or Proficiency
ENV221	OSHA 40-Hour HAZWOPER	2	
<i>Select one (1) Social & Behavioral Sciences or Arts & Humanities Elective from the list below¹</i>		3	<i>Check for prerequisites</i>
		15-16	
	TOTAL CREDITS	60-63	

^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.

¹Social & 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