



**ASSOCIATE OF APPLIED SCIENCE**  
**PETROLEUM TECHNOLOGY – INSTRUMENTATION**  
**ELECTRONICS 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.*

**1819 Catalog**  
Effective Summer 2018

**4326**

*Engineering Technologies Division*

*Oil and Gas Technology Department*

| TECHNICAL Course Number                | Course Title  | Credits                 | Pre- and Co-Requisites                                | Completed Sem./Year |
|--|---|-------------------------|---|---------------------|
| EST230                                 | Electrical Circuits and Devices <sup>^</sup>  | 4                       | [(MTH093 and MTH094) or Proficiency] or MTH107        |                     |
| MST221                                 | Mechanical Drive Components   | 3                       |   |                     |
| PET132                                 | Petroleum Instrumentation   | 3                       | EST230 and (CHM101 or ARL234)                         |                     |
| 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                       |   |                     |
| 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>               |   |                     |
| 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 or Proficiency                                 |                     |
| CHM101                                 | Introduction to Chemistry <sup>^▲</sup>   | 4                       | (MTH093 or Proficiency) or MTH105 or MTH106 or MTH107 |                     |
| MTH107<br>or<br>MTH125                 | Industrial Math <sup>^</sup><br>or<br>College Algebra <sup>^Ω</sup>                                     | 3<br>or<br>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<br>or<br>COM122<br>or<br>COM123 | Effective Speaking<br>or<br>Interpersonal Communication<br>or<br>Small Group Communication <sup>^</sup> | 3<br>or<br>3<br>or<br>3 | IDS102 or Proficiency                                 |                     |
| MST121<br>or<br>DET125                 | Blueprint Reading<br>or<br>Basic AutoCAD  | 2<br>or<br>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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**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 <sup>^</sup>   | 1                   | <i>Take first semester</i>   |
| MTH107                  | Industrial Math <sup>^</sup>   | 3                   |  |
| <b>or</b>               | <b>or</b>  | <b>or</b>           | <i>Check for prerequisites</i>   |
| MTH125                  | College Algebra <sup>^Ω</sup>  | 4                   |  |
| PET101                  | Introduction to the Petroleum Industry   | <u>3</u>            |  |
|                         |  | <b>7-8</b>          |  |
| <u>Second Semester</u>  |  |                     |  |
| EST230                  | Electrical Circuits and Devices <sup>^</sup>   | 4                   | [(MTH093 and MTH094) or Proficiency] <b>or</b> MTH107                      |
| ARL234                  | Gas Compression and Flow Dynamics  | <u>3</u>            |  |
|                         |  | <b>7</b>            |  |
| <u>Third Semester</u>   |  |                     |  |
| PET131                  | Corrosion Basics   | 3                   |  |
| PET135                  | Measurement and Basic Pipeline Operations  | <u>3</u>            |  |
|                         |  | <b>6</b>            |  |
| <u>Fourth Semester</u>  |  |                     |  |
| PET141                  | Production Operations  | 3                   |  |
| PET142                  | Artificial Lift  | 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>9</b>            |  |
| <u>Fifth Semester</u>   |  |                     |  |
| EET227                  | PLCs and Industrial Controls I   | 3                   | EET120 or EST230   |
| ITD122                  | Computer Applications for Professionals <sup>^</sup>   | <u>3</u>            | ITD100 <b>or</b> Proficiency   |
|                         |  | <b>6</b>            |  |
| <u>Sixth Semester</u>   |  |                     |  |
| PET102                  | Introduction to Supervisory Control and Data Acquisition (SCADA)   | 2                   |  |
| EET228                  | PLCs and Industrial Controls II  | 3                   | EET227   |
| PET132                  | Petroleum Instrumentation  | <u>3</u>            | EST230 <b>and</b> (CHM101 or ARL234)                                       |
|                         |  | <b>8</b>            |  |
| <u>Seventh Semester</u> |  |                     |  |
| MST221                  | Mechanical Drive Components  | 3                   |  |
| CHM101                  | Introduction to Chemistry <sup>^▲</sup>  | 4                   | (MTH093 or Proficiency) <b>or</b> MTH105 <b>or</b> MTH106 <b>or</b> MTH107 |
| ENV221                  | OSHA 40-Hour HAZWOPER  | <u>2</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 <sup>^</sup>   | 3                   | IDS102 <b>or</b> Proficiency   |
| ENG124                  | College Composition <sup>^</sup>   | 3                   | Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency                        |
| MST121                  | Blueprint Reading  | 2                   |  |
| <b>or</b>               | <b>or</b>  | <b>or</b>           |  |
| DET125                  | Basic AutoCAD  | <u>3</u>            |  |
|                         |  | <b>8-9</b>          |  |
|                         | <b>TOTAL CREDITS</b>   | <b>60-62</b>        |  |

See footnotes on previous page.