Stark State COLLEGE

MAP MY ACADEMIC PLAN

## ASSOCIATE OF APPLIED SCIENCE

# MECHANICAL ENGINEERING TECHNOLOGY – FUEL CELL 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.*

**2021 Catalog**
Effective Summer 2020

**4051**

*Engineering Technologies Division* *Engineering Technology Department*

| TECHNICAL Course Number | Course Title | Credits | Pre- and Co-Requisites | Completed Sem./Year |
|---|---|---|---|---|
| MET124 | Statics and Strength of Materials | 4 | Pre-Co-PHY121 **or** Pre Co-PHY221 | |
| MET229 | Introduction to Alternative and Renewable Energy/Fuel Cells | 3 | | |
| MET228 | Machine Design | 4 | MET124 | |
| MET225 **or** AIT122 | Manufacturing Processes **or** Machine Tools | 3 **or** 4 | | |
| MET230 | Analysis/Applications of Fuel Cells | 3 | MET229 | |
| MET231 | Fuel Cell Systems | 3 | MET230 | |
| MET227 | Thermodynamics and Heat Transfer | 3 | PHY121 | |
| MET232 | Fuel Cell Project | 3 | MET231 | |
| DET230 | AutoCAD Inventor with 3D Printing and Scanning | 3 | DET125 | |
| EST230 | Electrical Circuits and Devices^ | 4 | (MTH025 or Proficiency) **or** MTH107 | |
| | **Total** | **33-34** | | |

| NON-TECH Course Number | Course Title | Credits | Pre- and Co-Requisites | Completed Sem./Year |
|---|---|---|---|---|
| SSC101 | Student Success Seminar^^ | 1 | *Take first semester* | |
| CSE122 | Programming Logic and Problem Solving^ | 3 | (IDS102 or Proficiency) **and** (ITD100 or Proficiency) | |
| DET125 | Basic AutoCAD | 3 | | |
| MTH135 | Precalculus^ – *A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.* | 5 | MTH025 **or** Proficiency | |
| PHY121 | College Physics I with Algebra (lab)^ | 4 | MTH135 **or** (MTH125 and MTH130) **or** Proficiency | |
| CHM141 | General Chemistry I (lab)⅄ | 5 | (CHM101 **or** Proficiency) **or** (MTH024 **or** MTH025 **or** Proficiency) | |
| ENG124 | College Composition^ | 3 | Co-ENG024 **or** Co-ENG011 **or** Proficiency | |
| ENG221 | Technical Report Writing | 3 | ENG124 | |
| | *Select one (1) Arts & Humanities Elective*[1] | 3 | *Check for prerequisites* | |
| | **Total** | **30** | | |
| | **TOTAL CREDIT HOURS** | **63-64** | | |

^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.

| 2021 Catalog<br>Effective Summer 2020 | MECHANICAL ENGINEERING TECHNOLOGY – FUEL CELL MAJOR | 4051 |
|---|---|---|

[1]Arts & Humanities Electives: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, PHL122

## 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.

| First Semester | | Credit Hours | Pre- and Co-requisites |
|---|---|---|---|
| SSC101 | Student Success Seminar^^ | 1 | *Take first semester* |
| MET229 | Introduction to Alternative and Renewable Energy/Fuel Cells | 3 | |
| ENG124 | College Composition^ | 3 | Co-ENG024 **or** Co-ENG011 **or** Proficiency |
| | | **7** | |
| Second Semester | | | |
| MTH135 | Precalculus^ – *A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.* | 5 | MTH025 **or** Proficiency |
| MET230 | Analysis/Applications of Fuel Cells | 3 | MET229 |
| | | **8** | |
| Third Semester | | | |
| PHY121 | College Physics I with Algebra (lab)^ | 4 | MTH135 **or** (MTH125 and MTH130) **or** Proficiency |
| CHM141 | General Chemistry I (lab)^ | 5 | (CHM101 **or** Proficiency) **or** (MTH024 **or** MTH025 **or** Proficiency) |
| | | **9** | |
| Fourth Semester | | | |
| MET124 | Statics and Strength of Materials | 4 | Pre-Co-PHY121 **or** Pre-Co-PHY221 |
| CSE122 | Programming Logic and Problem Solving^ | 3 | (IDS102 or Proficiency) **and** (ITD100 or Proficiency) |
| DET125 | Basic AutoCAD | 3 | |
| | | **10** | |
| Fifth Semester | | | |
| MET228 | Machine Design | 4 | MET124 |
| MET231 | Fuel Cell Systems | 3 | MET230 |
| | | **7** | |
| Sixth Semester | | | |
| EST230 | Electrical Circuits and Devices^ | 4 | (MTH025 or Proficiency) **or** MTH107 |
| MET232 | Fuel Cell Project | 3 | MET231 |
| | | **7** | |
| Seventh Semester | | | |
| MET227 | Thermodynamics and Heat Transfer | 3 | PHY121 |
| DET230 | AutoCAD Inventor with 3D Printing and Scanning | 3 | DET125 |
| ENG221 | Technical Report Writing | 3 | ENG124 |
| | | **9** | |
| Eighth Semester | | | |
| MET225 | Manufacturing Processes | 3 | |
| **or** | **or** | **or** | |
| AIT122 | Machine Tools | 4 | |
| *Arts & Humanities Elective*[1] | | 3 | *Check for prerequisites* |
| | | **6-7** | |
| | **TOTAL CREDITS** | **63-64** | |

*See footnotes on first page.*