

ASSOCIATE OF SCIENCE DEGREE

Pre-Engineering – Alternative Energy Option

The Associate in Science (A.S.) Pre-Engineering degree is a cooperative program between Crowder College and the School of Engineering at the Missouri University of Science & Technology. In addition, similar cooperative programs have been developed with the University of Missouri - Columbia and the University of Arkansas. Although not specifically designed for transfer to other engineering schools, the A.S. program does incorporate the essential course work for the first two years of study in any engineering field at other universities. Some of the course requirements vary with the engineering departments cooperating in this program. Those requirements are marked with a (†). In such cases, students will need to consult with the adviser as to the appropriate class for a particular engineering major.

Crowder College and the School of Engineering at Missouri University of Science & Technology have instituted an advisement and counseling program for pre-engineering majors. Students enrolling at Crowder can be simultaneously enrolled at Missouri S&T's Transfer Assistance Program. This allows for a smoother transition between the two institutions. Students are also allowed to participate in special pre-registration programs on the Missouri S&T campus.

Crowder College offers two degree programs in pre-engineering. The A.S. Pre-Engineering degree is designed for those students who plan to enter into traditional engineering fields such as Mechanical, Electrical, Civil, etc. The A.S. Pre-Engineering Alternative Energy Option degree is designed for those students who wish to pursue a career in alternative energies. Grades below a "C" are not allowed.

Program of Study

| | | | |
|--|-----------------------------|--|------------------------|
| Orientation | | 1 hour | |
| COLL | 101 | | |
| Communications | | 6 hours | |
| ENGL | 101* | | |
| ENGL | 102* | OR | ENGL 104* (3) |
| COMM | 104* | | |
| Humanities, Social and Behavioral Science † | | 12 hours | |
| Missouri Constitution (3 hours) | | Economics (3 hours): | |
| PLSC | 103*, 104* | ECON | 201*, 202* |
| HIST | 106* | | |
| Humanities (3 hours) | | Additional humanities (3 hours) | |
| ART | 101 | ECON | 201*, 202* |
| ASL | 101, 102* | GEOG | 111 |
| ENGL | 109, 120, 125 | HIST | 101*, 102*, 106*, 107* |
| HIST | 101* | PHIL | 110*, 121 |
| MUSC | 101 | PLSC | 103*, 104* |
| PHIL | 101*, 110*, 121, 201*, 202* | PSYC | 101 |
| SPAN | 101 | SOC | 101 |
| SWK | 219 | | |
| TA | 205 | | |
| Mathematics | | 18 hours | |
| MATH | 150* | MATH | 202* |
| MATH | 160* | MATH | 210* |
| MATH | 201* | | |
| Science | | 18 hours | |
| PHYS | 190* | CHEM | 111 |
| PHYS | 210* | | |
| PHYS | 250* | | |
| Computer Science | | 4 hours | |
| COMP | 111* | | |
| Technical Electives | | 6 hours | |
| CHEM | 112* | ENER | 251* |
| ENER | 150* | ENER | 256 |
| ENER | 151* | ENER | 134* |
| ENER | 156 | ENER | 232* |
| ENER | 250* | | |

Suggested Plan of Study

| FIRST YEAR | | |
|--------------------------------|-----------------------------|--------------|
| <i>Fall Semester</i> | | <i>Hours</i> |
| CHEM 111 | General Chemistry I | 5 |
| COLL 101 | College Orientation | 1 |
| COMP 111 | Introduction to Programming | 4 |
| ENGL 101 | English Composition I | 3 |
| MATH 150 | Calculus I, Part 1 | 2 |
| Total | | 15 |
| <i>Spring Semester</i> | | <i>Hours</i> |
| ECON 201 – OR – ECON 202 | | 3 |
| MATH 160 | Calculus I, Part 2 | 3 |
| PHYS 190 | General Physics I | 5 |
| Approved Communications Course | | 3 |
| Approved Humanities Course | | 3 |
| Total | | 17 |
| SECOND YEAR | | |
| <i>Fall Semester</i> | | <i>Hours</i> |
| HIST 106 | US History – OR – PLSC 103 | 3 |
| MATH 201 | Calculus II | 5 |
| PHYS 210 | General Physics II | 5 |
| Approved Humanities Course | | 3 |
| Total | | 16 |
| <i>Spring Semester</i> | | <i>Hours</i> |
| MATH 202 | Calculus III | 5 |
| MATH 210 | Differential Equations | 3 |
| PHYS 250 | Statics | 3 |
| Approved Technical Electives | | 6 |
| Total | | 17 |
| TOTAL HOURS REQUIRED | | 65 |

*Prerequisite requirement

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.