Engineering as a Profession

Engineers are in high demand in virtually every area of engineering expertise, including civil, mechanical, electrical, chemical, and medical technology. The engineer frequently works as a member of a team with scientists, skilled technicians and other engineers in industry settings. Unlike the scientist whose task is the understanding and explanation of phenomena, the engineer is called upon to use scientific knowledge to create new devices, systems and processes to solve problems relevant to production and meeting human needs.

It’s easy to get started ...

1. Complete an application for admissions
2. Take the COMPASS assessment (practice test online at http://www.act.org/compass/sample/index.html)
3. Meet with a DCC Counselor to discuss your assessment results and program placement
4. Meet with an Engineering advisor to select and register for classes
5. Apply for a National Science Foundation award for tuition support
6. Pay for your classes!

For more information about this program, contact the faculty:

Dr. Paul Fox, Professor of Chemistry, 434.797.8472, email: pfox@dcc.vccs.edu

Dr. Mukesh Chhajer, Assistant Professor of Physics and Math, 434.797.8491, email: mchhajer@dcc.vccs.edu

Danville Community College does not discriminate on the basis of race, color, age, national origin, sex, or disability in its programs or activities. Member, Virginia’s Community Colleges
Program Requirements

This curriculum requires a majority of the courses be completed in areas of engineering, mathematics and the physical sciences. It is recommended to students with a strong interest in Mathematics and the sciences. However, the curriculum also includes electives in humanities and social sciences so that the student can select the appropriate courses for his or her pre-professional program as required in the first two years of a prospective four-year College or university degree. Students should become familiar with the requirements of the major department at their contemplated transfer institutions. When students have a choice of courses, they should base their choices on the requirements of transfer institutions.

Admission Requirements

In addition to the admission requirements established for the College, entry into the Engineering program requires satisfactory completion of the following high school units or equivalent as a minimum: 4 years of English, 3 years of mathematics (Algebra I, Algebra II, and Geometry), 1 year of laboratory science and 1 year of social science. A course in trigonometry would also be desirable. Students are encouraged to take MTH 166 prior to beginning calculus in the first fall semester, especially if they have not completed MTH 163/164 or have not taken any math courses during the past year. Students with deficiencies in English or Math will require developmental studies at DCC and will not be able to complete the program within a two year window. The SAT, ACT or COMPASS test is required for admission to the program.

National Science Foundation

DCC is a partner with the University of Virginia and Central Virginia Community College (CVCC) in a National Science Foundation grant which provides tuition support to students in the Engineering programs at DCC or CVCC. Students are encouraged to apply for this support by completing the online application. The application and procedures are available at http://www.dcc.vccs.edu/Departments/a&s/Academics/Engineering.htm or from DCC’s Arts and Sciences Division Office, located in the Temple Building.

Engineering Curriculum

Suggested Sequence of Study

First Semester
- ENG 111 College Composition I 3
- MTH 173 Calculus with Analytical Geometry I 5
- EGR 120 Introduction to Engineering 1
- CHM 111 College Chemistry I 4
- SDV 100 Orientation 1
- Humanities Elective 3

Second Semester
- ENG 112 College Composition II 3
- MTH 174 Calculus with Analytical Geometry II 5
- EGR 126 Computer Programming for Engineers 3
- CHM 112 Chemistry II 4
- Humanities Elective 3

Third Semester
- MTH 277 Vector Calculus 4
- PHY 241 General University Physics I 4
- EGR 140 Engineering Mechanics -- Statics 3
- EGR 248 Thermodynamics for Engineers 3
- HLT/PED Health or Physical Education 1
- Social Sciences Elective 3

Fourth Semester
- MTH 279 Ordinary Differential Equations 4
- PHY 242 General University Physics II 4
- EGR 246 Mechanics of Materials 3
- EGR 245 Engineering Mechanics -- Dynamics 3
- HLT/PED Health or Physical Education 1
- Social Sciences Elective 3

Total Credits 71