ENGINEERING, ASSOCIATE IN SCIENCE (EGR)

Effective: Fall 2016

The Engineering program is a two-year preparatory curriculum for students who plan to continue their education at a four-year institution and complete their major in an engineering science field.

Program Outcomes

Upon successful completion of this program, students should be able to:

- Demonstrate an understanding of key concepts in the physical, mathematical, and computational sciences.
- Apply mathematical and scientific concepts and principles to engineering problems.
- Present technical information in written or graphic form.
- Demonstrate an understanding of the academic and career aspects of various disciplines within engineering or engineering technology, select a particular discipline, and develop an academic plan consistent with the chosen discipline.

Full-Time Academic Plan

The College Transfer Office (https://www.dccc.edu/admissions-financial-aid/transfer/transfer-office) is set up to help Delaware County Community College students transfer to four-year colleges and universities. If you are planning to transfer, you are strongly encouraged to meet with a transfer advisor within your first two semesters (or before you reach 30 transferable college credits from all institutions attended).

First Semester		Hours
ENG 100	English Composition I	3
MAT 160	Calculus I	4
CHE 110	General Chemistry I	4
EGR 150	Engineering Topics	1
CS 101	Introduction to Computer Science	3
	Hours	**15**
Second Semester		
ENG 112	English Composition II: Writing About Literature	3
MAT 161	Calculus II	4
CHE 111	General Chemistry II	4
PHY 131	University Physics I	4
	Hours	**15**
Third Semester		
MAT 260	Calculus III	4
PHY 132	University Physics II	4
Any transferable Diversity and Social Justice designated Social Science course		3
Any transferable Global Understanding designated Social Science course		3
Engineering Curriculum Elective		3-5
	Hours	**17-19**
Fourth Semester		
MAT 261	Differential Equations	3
COMM 100 or COMM 111	Interpersonal Communication or Public Speaking	3
Engineering Curriculum Electives		6-9
Arts & Humanities Elective		3
	Hours	**15-18**
	Total Hours	**62-67**

Notes

Diversity and Social Justice (DJ) designated courses (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#DJ_Course_List).

Global Understanding (GU) designated courses (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#GU_Course_List).

Arts and Humanities Electives

This list does not indicate College Academic Learning Goal designation (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/). Refer to your program curriculum for more information.

The subject areas listed are generally transferable to most institutions. However, transferability is always determined by the college or university you are planning to transfer to. Be sure to meet with a transfer advisor before making your course selections.

- ART - Art (https://catalog.dccc.edu/courses/course-descriptions/art/)
- COMM - Communication Studies (https://catalog.dccc.edu/courses/course-descriptions/comm/)
- DRA - Drama (https://catalog.dccc.edu/courses/course-descriptions/dra/)
- ENG - English (https://catalog.dccc.edu/courses/course-descriptions/eng/) (ENG 115 and above)
- HUM - Humanities (https://catalog.dccc.edu/courses/course-descriptions/hum/)
- MUS - Music (https://catalog.dccc.edu/courses/course-descriptions/mus/)
- PHI - Philosophy (https://catalog.dccc.edu/courses/course-descriptions/phi/)

Some programs specify or recommend a Foreign Language.

Code	Title	Hours
Foreign Languages:		
FRE 101	Elementary French I	
FRE 102	Elementary French II	
FRE 111	Intermediate French I	
FRE 112	Intermediate French II	
SPA 101	Elementary Spanish I	
SPA 102	Elementary Spanish II	
SPA 201	Intermediate Spanish I	
SPA 202	Intermediate Spanish II	

Engineering Electives

Students must take a minimum of one of the following engineering courses as part of the Engineering Curriculum Electives:

Code	Title	Hours
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3

Students must select two additional Engineering Curriculum Electives.

Suggested electives by transfer discipline are listed below:

For chemical engineering:

Code	Title	Hours
CHE 200	Organic Chemistry I	5
CHE 201	Organic Chemistry II	5
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3

For civil engineering:

Code	Title	Hours
EGR 100	Engineering Graphics	3
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 220	Engineering Thermodynamics	3

For electrical/computer engineering:

Code	Title	Hours
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3
CS 110	Introduction to C++	3
CS 210	Object Oriented C++	3
MAT 200	Linear Algebra	3

For mechanical engineering:

Code	Title	Hours
EGR 100	Engineering Graphics	3
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3
MAT 200	Linear Algebra	3

Students are strongly encouraged to consult with both the DCCC Transfer Office as well as their academic advisor prior to selecting Engineering Curriculum Electives.

Part-Time Academic Plan

Course	Title	Hours
First Semester		
ENG 100	English Composition I	3
MAT 160	Calculus I	4
EGR 150	Engineering Topics	1
	Hours	**8**
Second Semester		
CHE 110	General Chemistry I	4
CS 101	Introduction to Computer Science	3
	Hours	**7**
Third Semester		
MAT 161	Calculus II	4
CHE 111	General Chemistry II	4
	Hours	**8**
Fourth Semester		
MAT 260	Calculus III	4
PHY 131	University Physics I	4
	Hours	**8**
Fifth Semester		
PHY 132	University Physics II	4
ENG 112	English Composition II: Writing About Literature	3
Any transferable Diversity and Social Justice designated Social Science course		3
	Hours	**10**
Sixth Semester		
Any transferable Global Understanding designated Social Science course		3
Engineering Curriculum Elective		3-5
	Hours	**6-8**
Seventh Semester		
MAT 261	Differential Equations	3
COMM 100 or COMM 111	Interpersonal Communication or Public Speaking	3
Engineering Curriculum Elective		3
	Hours	**9**
Eighth Semester		
Engineering Curriculum Elective		3-6
Arts & Humanities Elective		3
	Hours	**6-9**
	Total Hours	**62-67**

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Global Understanding (GU) designated courses (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#GU_Course_List).

Arts and Humanities Electives

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EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3

Students must select two additional Engineering Curriculum Electives.

Suggested electives by transfer discipline are listed below:

For chemical engineering:

Code	Title	Hours
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CHE 201	Organic Chemistry II	5
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3

For civil engineering:

Code	Title	Hours
EGR 100	Engineering Graphics	3
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 220	Engineering Thermodynamics	3

For electrical/computer engineering:

Code	Title	Hours
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3
CS 110	Introduction to C++	3
CS 210	Object Oriented C++	3
MAT 200	Linear Algebra	3

For mechanical engineering:

Code	Title	Hours
EGR 100	Engineering Graphics	3
EGR 200	Engineering Statics	3
EGR 201	Engineering Dynamics	3
EGR 210	Engineering Circuits	4
EGR 220	Engineering Thermodynamics	3
MAT 200	Linear Algebra	3

Students are strongly encouraged to consult with both the DCCC Transfer Office as well as their academic advisor prior to selecting Engineering Curriculum Electives.

Career