

## *Associate of Science Degree: Engineering Specialization*

**AREA:** Science  
Engineering Specialization

**DEGREE:** Associate of Science Degree

**LENGTH:** Four semesters (two-year) program

**PURPOSE:** With tremendous emphasis on technological developments in today's society, great demand exists for engineers to work with developing technologies both at the development stage and the application stage. The associate of science degree program with a specialization in engineering is designed for persons who plan to transfer to a four-year college or university to complete a baccalaureate or higher degree program in an engineering discipline such as mechanical, civil, construction, ocean and mining, and materials engineering.

**TRANSFER GUIDELINES:** The associate of arts and sciences (AA&S) and associate of science (AS) degrees offered by LFCC are designed to provide freshman and sophomore level course work toward the completion of a bachelor's degree. The AA&S and AS degree programs require students to take essentially the same courses as required by their university/four-year college counterparts in the areas of English, health/physical education, humanities, mathematics, science and social science.

To help facilitate the transfer process, LFCC has created an online 'Transfer Guide' that provides detailed information such as tuition, GPA, application requirements, course equivalents, and other information that may be useful in the transfer process. The transfer guide can be found at [www.lfcc.edu/transfer](http://www.lfcc.edu/transfer). The Virginia Community College System also offers a Transfer Planning Tool on the Virginia Educational Wizard, which can be found at [www.vawizard.org](http://www.vawizard.org).

Students should begin preparing for transfer as early as possible. Steps in this process include: making a career decision, identifying colleges which offer the intended program of study, examining available transfer information and college catalogs, exploring Guaranteed Admissions and Transfer agreements, talking with transfer representatives, identifying program prerequisites, researching the academic competitiveness of the institutions and program under consideration, attending open house events offered by the colleges and exploring financial aid and housing opportunities.

LFCC offers many services and programs to assist the transfer student. Students are encouraged to seek the assistance of an advisor or counselor to gain additional information to plan a successful transfer experience.

Course #	Title	Credits
<b>First Semester</b>		
ENG 111	College Composition I	3
IT/CS	Computer Elective <sup>1</sup>	3
MTH	Mathematics Elective <sup>2</sup>	3-5
SDV 100/101	College Success Skills Science with Laboratory <sup>3</sup>	1 4
EGR 120	Intro to Engineering	2
<b>Total</b>		<b>16-18</b>
<b>Second Semester</b>		
ENG 112	College Composition II Humanities/Fine Arts <sup>4</sup>	3 3
MTH	Mathematics Elective <sup>2</sup>	3-5
MTH 177	Introductory Linear Algebra	2
EGR 123	Intro to Engineering Design	2
CST	Communication Elective <sup>4</sup>	3
<b>Total</b>		<b>16-18</b>
<b>Third Semester</b>		
	Social Science Elective <sup>4</sup>	3
	Approved STEM Elective <sup>5</sup>	3
PED/HLT	Physical Education or Health <sup>4</sup>	1
EGR 140	Engineering Mechanics-Statics	3
EGR 245 or 206	Engineering Mechanics Dynamics or Engineering Economics Science with Laboratory <sup>3</sup>	3 4
<b>Total</b>		<b>17</b>
<b>Fourth Semester</b>		
ENG	Literature Elective <sup>4</sup>	3
	Social Science Elective <sup>4</sup>	3
	Science with Laboratory <sup>3</sup>	4
EGR 246	Mechanics of Materials Approved STEM Elective <sup>5</sup>	3 3
<b>Total</b>		<b>16</b>
<b>Program Total</b>		<b>65-69</b>

<sup>1</sup>Students will be required to take following course to fulfill the computer / information literacy requirement: EGR 126

<sup>2</sup>Students will be required to take MTH 173 and MTH 174 – Calculus with Analytical Geometry I and II.

<sup>3</sup>In the First semester, students should take CHM 111 – College Chemistry I. In the Third semester, students should take PHY 241 – University Physics I, and in the Fourth semester, PHY 242 – University Physics II.

<sup>4</sup>See the list of electives on page 41.

<sup>5</sup>May be BIO, CHM, CSC, EGR, GOL, MTH, NAS or PHY