

# Master Academic Plan—AES

## Associate in Engineering Science Degree

Name: \_\_\_\_\_ Student ID No.: \_\_\_\_\_

Baccalaureate engineering programs are highly structured in order to meet standards established by the Accreditation Board for Engineering and Technology (ABET) which are required for candidates seeking State of Illinois registration as a professional engineer. To transfer as a junior into a baccalaureate engineering program, students must complete a minimum of 62 semester hours to a maximum of 68 semester hours from the following list, including all of the essential prerequisite courses. Students with fewer than 68 semester hours at transfer are unlikely to complete the baccalaureate degree within two years after transfer. Since admission is highly competitive, completion of the courses listed does not guarantee admission. Students should select courses in consultation with the Transfer Center to be certain they meet the requirements of the institution to which they plan to transfer.

### General Education Core Courses<sup>1</sup>:

#### 12-18 Semester Hours

ENG 101 Composition & Rhetoric \_\_\_\_\_ 3 \_\_ SH  
ENG 102 Composition & Research \_\_\_\_\_ 3 \_\_ SH  
Group III Social & Behavioral Science\* \_\_\_\_\_ 3-9 \_\_ SH  
Group II Humanities/Fine Arts\* \_\_\_\_\_ 3-9 \_\_ SH

### Required Prerequisite Courses:

#### 34-38 Semester Hours

CHM 113 General Chemistry I \_\_\_\_\_ 5 \_\_ SH  
C-S 121 Computer Science I \_\_\_\_\_ 4\* \_\_ SH  
MTH 190 Calculus & Analytic Geometry I \_\_\_\_\_ 5 \_\_ SH  
MTH 203 Calculus & Analytic Geometry II \_\_\_\_\_ 5 \_\_ SH  
MTH 204 Calculus & Analytic Geometry III \_\_\_\_\_ 4 \_\_ SH  
MTH 205 Differential Equations \_\_\_\_\_ 3 \_\_ SH  
PHY 210 University Physics I \_\_\_\_\_ 4 \_\_ SH  
PHY 211 University Physics II \_\_\_\_\_ 4 \_\_ SH  
PHY 212 University Physics III (Optional)<sup>2</sup> \_\_\_\_\_ 4 \_\_ SH

### Engineering Specialty Courses:

#### 4-15 Semester Hours

#### Aeronautical, Manufacturing, Mechanical Engineering and Engineering Mechanics (U0053ME)

EGR 101 Engineering Graphics \_\_\_\_\_ 3 \_\_ SH  
EGR 201 Electrical Circuits \_\_\_\_\_ 4 \_\_ SH  
EGR 203 Statics \_\_\_\_\_ 3 \_\_ SH  
EGR 204 Engineering Dynamics \_\_\_\_\_ 3 \_\_ SH

#### Chemical Engineering (U0053CE)

CHM 114 General Chemistry II \_\_\_\_\_ 5 \_\_ SH  
CHM 203 Organic Chemistry I \_\_\_\_\_ 5 \_\_ SH  
CHM 204 Organic Chemistry II \_\_\_\_\_ 5 \_\_ SH

#### Civil Engineering (U0053CV)

EGR 101 Engineering Graphics \_\_\_\_\_ 3 \_\_ SH  
EGR 203 Statics \_\_\_\_\_ 3 \_\_ SH  
EGR 204 Engineering Dynamics \_\_\_\_\_ 3 \_\_ SH

#### Computer and Electrical Engineering\* (U0053EE)

EGR 201 Electrical Circuits \_\_\_\_\_ 4 \_\_ SH

#### Industrial Engineering (U0053IE)

EGR 203 Statics \_\_\_\_\_ 3 \_\_ SH  
EGR 204 Engineering Dynamics \_\_\_\_\_ 3 \_\_ SH  
ECO 201 Princ. of Economics, Macro \_\_\_\_\_ 3 \_\_ SH  
ECO 202 Princ. of Economics, Micro \_\_\_\_\_ 3 \_\_ SH

#### Mining Engineering (Southern Illinois University) (U0053MN)

EGR 203 Statics \_\_\_\_\_ 3 \_\_ SH  
EGR 204 Engineering Dynamics \_\_\_\_\_ 3 \_\_ SH  
GLG 101 Physical Geology \_\_\_\_\_ 4 \_\_ SH

#### Nuclear Engineering (University of Illinois) (U0053NE)

EGR 101 Engineering Graphics \_\_\_\_\_ 3 \_\_ SH  
EGR 203 Statics \_\_\_\_\_ 3 \_\_ SH  
EGR 204 Engineering Dynamics \_\_\_\_\_ 3 \_\_ SH

#### Agricultural Engineering (University of Illinois) (U0053AE)

BIO 105 General Biology I \_\_\_\_\_ 4 \_\_ SH  
CAD 101 AutoCAD I \_\_\_\_\_ 2 \_\_ SH  
EGR 203 Statics \_\_\_\_\_ 3 \_\_ SH  
EGR 204 Engineering Dynamics \_\_\_\_\_ 3 \_\_ SH

**Bioengineering (U0053BE)**

BIO 105 General Biology I \_\_\_\_\_ 4 \_\_ SH

BIO 106 General Biology II \_\_\_\_\_ 4 \_\_ SH

BIO 200 Comparative Anatomy of the Vertebrate OR

BIO 213 General Ecological Botany OR

BIO 224 Microbiology \_\_\_\_\_ 4-5 \_\_ SH

**Total for AES \_\_\_\_\_ 62\* \_\_ SH**

\*EGR 203 and 204 may be required. Check the transfer institution to which you plan to transfer.

\*Less than 40% of total degree credit hours may be taken in an online format when online courses are available.

<sup>1</sup>Since completion of this engineering curriculum does not fulfill the requirements of the Illinois General Education Core Curriculum, students will need to complete the general education requirements of the institution to which they transfer.

<sup>2</sup>Most baccalaureate programs require the three semester sequence of calculus-based physics courses for engineering programs. Students are advised to complete the entire sequence at SSC if they plan to transfer to such a program.

<sup>3</sup>Dependent upon transfer institution.

†Note: All full-time transfer students are required to take OCS 121.

Developmental courses do not count towards degree.

<b>Developmental Courses</b>	
ENG	_____
MTH	_____
RDG	_____