

ASSOCIATE IN ENGINEERING SCIENCE DEGREE

Bachelor's engineering programs are highly structured to meet the Accreditation Board for Engineering and Technology (ABET) standards required for candidates seeking Illinois registration as a professional engineer. The Associate in Engineering Science (AES) degree is designed to parallel the first two years of pre-engineering programs at most Illinois universities and facilitates students transferring into a bachelor's engineering program with junior standing.

Due to the rigor of the AES curriculum, it is ideal for students to have taken a fourth course of math in high school, or at least have an aptitude in science and math.

Students should select courses in consultation with an academic advisor and should decide on their engineering specialty and their preferred transfer school at the beginning of the sophomore year (at 30 semester hours), since engineering course selections may vary by specialty and school.

Admission into engineering is very competitive. Completion of the pre-engineering courses alone does not guarantee admission to an engineering program.

The college recommends using the Academic Planning, Registration, and Payment Tool on accessECC to track your progress toward completion.

The general education courses required for the AES degree are approved by the Illinois Articulation Initiative (IAI); however, the structure of the AES does not meet the minimum IAI general education core requirements. Students will need to complete the general education requirements of the school to which they transfer.

Degree Requirements

Course	Title	Credits
General Education Requirement		
<i>Communications</i>		31-43
ENG 101	English Composition I	
ENG 102	English Composition II	
<i>Mathematics</i>		10
MTH 190	Calculus with Analytic Geometry I	
MTH 210	Calculus with Analytic Geometry II	
<i>Life/Physical Sciences</i>		10
CHM 142	General Chemistry I (L)	
PHY 211	Engineering Physics I (L)	
<i>Humanities/Fine Arts</i>		3-9
Choose from approved IAI courses listed below. (If two courses are selected, a two-course sequence in the same discipline is recommended.)		
Humanities:		
FRN 202	Intermediate French II	
GRM 202	Intermediate German II	
SPN 202	Intermediate Spanish II	
SPN 251	Spanish for Spanish Speakers I	
SPN 271	Latin American Civilization	
HIS 118	Foundations of Civilization	

HIS 160	American Civilization
HUM 101	Introduction to Western Humanities I
HUM 102	Introduction to Western Humanities II
HUM 103	Intro to Non-Western Humanities (N)
HUM 110	Introduction to Philosophy
HUM 112	Western Philosophy I
HUM 113	Western Philosophy II
HUM 115	Critical Reasoning
HUM 116	Logic
HUM 170	Introduction to Asian Philosophies (N)
HUM 202	Philosophy of Religion
HUM 203	Comparative Religions (N)
HUM 204	Introduction to Religious Studies
HUM 205	Introduction to Mythology
HUM 216	Ethics
LIT 201	Introduction to Literature:Fiction
LIT 202	Introduction to Literature:Drama
LIT 203	Introduction to Literature:Poetry
LIT 205	Introduction to Shakespeare
LIT 206	Latinx Literatures of the US (D)
LIT 209	African American Lit 1619-1940 (D)
LIT 210	Multicultural American Literature (D)
LIT 211	Intro to Literature by Women (D)
LIT 220	LGBTQ Literature (D)
LIT 223	International Literature (N)
LIT 225	Children's Literature
LIT 229	Novel and Film
LIT 230	Masterpieces of World Lit
LIT 235	Bible as Literature
LIT 241	Great Books Seminar I
LIT 242	Great Books Seminar II
LIT 243	Great Books Seminar III
LIT 244	Great Books Seminar IV
LIT 245	Great Books Seminar V
Fine Arts:	
ART 115	Art Appreciation
ART 130	Art of Film
ART 151	History of Art I
ART 152	History of Art II
ART 154	Survey of Non-Western Art (N)
ART 155	History of Photography
ART 231	The Story of Film to WWII
ART 232	The Story of Film After WWII
HUM 101	Introduction to Western Humanities I
HUM 102	Introduction to Western Humanities II
HUM 103	Intro to Non-Western Humanities (N)
MUS 104	Musics of the World (N)
MUS 105	Music Appreciation
MUS 106	Music Literature From 1400 to 1750
MUS 107	Music Liter. From 1750 to Present
MUS 145	Hip Hop Music Appreciation
MUS 146	Rock and Roll Music Appreciation

CMS 106	Introduction to Film Appreciation
THE 100	Theatre Appreciation
THE 122	Intro-Theatre History & Literature
THE 124	American Drama

Social/Behavioral Sciences 3-9

Choose from approved IAI courses listed below. (If two courses are selected, a two-course sequence in the same discipline is recommended.)

Social Sciences:

ECN 101	Fundamentals of Economics
ECN 201	Principles of Microeconomics
ECN 202	Principles of Macroeconomics
GEO 116	Human Geography (N)
GEO 216	Geography of the Developing World (N)
HIS 101	History of Western Civilization I
HIS 102	History of Western Civilization II
HIS 115	History of World Civilizations I (N)
HIS 116	History of World Civilizations II (N)
HIS 119	History & Politics of Gender
HIS 120	History of the Non-Western World I (N)
HIS 121	History of the Non-Western World II (N)
HIS 130	History of Latin America I (N)
HIS 131	History of Latin America II (N)
HIS 140	History of Asia & Pacific I (N)
HIS 141	History of Asia & Pacific II (N)
HIS 150	History of Native America (D)
HIS 151	U S History to 1870
HIS 152	U S History Since 1865
HIS 180	History of U.S. Latinas and Latinos (D)
HIS 189	African American History I (D)
HIS 190	African American History II (D)
POS 150	Amer Government - National
POS 151	Amer Govt State Local
POS 152	Principles of Political Science
POS 250	Comparative Political Systems
POS 251	International Relations
POS 253	Non-Western Comparative Government (N)

Behavioral Sciences:

ATR 120	Introduction to Anthropology (N)
ATR 210	General Prehistoric Archeology
ATR 220	Cultural Anthropology (N)
ATR 250	Human Evolution
PSY 100	Intro to Psychology
PSY 212	Child Psychology
PSY 214	Adulthood and Aging
PSY 215	Social Psychology
PSY 218	Human Growth and Development
SOC 100	Principles of Sociology
SOC 201	Social Problems
SOC 209	Racial and Ethnic Relations (D)
SOC 210	Marriage and Family
SOC 215	Social Psychology

SOC 220	Gender Roles and Social Change (D)
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Essential Prerequisite and Pre-Engineering Specialty Courses*Essential Prerequisite Courses*¹ 17

CIS/MTH 123	Computer Science for Engineers
MTH 230	Calculus with Analytic Geometry III
MTH 250	Differential Equations
PHY 212	Engineering Physics II

Pre-Engineering Specialty Courses 5-16

ECN 201	Principles of Microeconomics
CHM 143	General Chemistry II
CHM 234	Organic Chemistry I
CHM 235	Organic Chemistry II
CIS 127	Discrete Structures
CIS 223	Computer Science II
CIS 226	Computer Science III
EGR 100	Introduction to Engineering
EGR 101	Engineering Design Graphics/Cad
EGR 152	Statics
EGR 172	Mechanics of Materials
EGR 252	Dynamics
MTH 240	Introduction to Linear Algebra
PHY 215	Thermal Physics
PHY 216	Quantum Physics

Major Field and Elective Courses by Specialty

EGR 101	Engineering Design Graphics/Cad
EGR 152	Statics
EGR 252	Dynamics
EGR 192	Engineering Thermodynamics
EGR 272	Circuit Analysis and Theory
EGR 292	Introduction to Digital Systems

Total Credit Hours 79-114

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No math lower than MTH 190 Calculus with Analytic Geometry I will count towards the degree.

College Requirements

1. A total of 60 hours or more must be completed as specified. This total cannot include any credits earned in courses numbered below 100 nor any courses with ABE, ASE, AMT, ARW, or ESL prefixes.
2. A minimum cumulative grade point average of 2.0 for all courses that are applied to the degree.
3. Meet the college's Academic Residency Requirement for University Transfer degrees: A minimum of 15 semester hours in courses numbered 100 and above and must have been achieved at ECC, excluding AP, CLEP, and proficiency credits.
4. Students may apply up to six hours of Independent Study credit toward any associate degree.
5. Students can earn only one transfer associate degree. Should a student seek to earn more than one transfer degree, a Petition to Earn Multiple Transfer Degrees form must be submitted to the associate dean of advising, transfer, and career development services.