

Requirements for Associate in Engineering Science (AES) Degree

The Associate in Engineering Science degree allows pre-engineering students to complete a significant portion of lower-level baccalaureate degree coursework prior to transfer. Baccalaureate engineering programs are highly structured and require extensive, sequential mathematics and science courses at the lower level. Completion of the AES degree does not fulfill the requirements of the Illinois Articulation Initiative General Education Core Curriculum (IAI GECC). In order to take courses in a similar pattern to those of the freshman and sophomore engineering students at a university, some general education courses are postponed to the junior and senior years. After transfer, students either complete the general education requirements of the transfer institution or are given the opportunity to complete the

IAI GECC. Engineering programs vary from one institution to another. **It is important that students work closely with an MCC academic advisor and their transfer school.**

The following requirements apply to students who first enrolled for Fall 2011 or later. Students who first enrolled prior to Fall 2011 should contact an academic advisor for more information.

- Credit hours are shown in parentheses in front of the course number.
- IAI GECC and Baccalaureate Major course numbers are in bold to the right of the MCC course numbers and titles (e.g., **C1 900, EGR 941**). Please see an academic advisor for more information about IAI course equivalencies.

Curriculum: BAC 050	Credit Hours		
Communications (C) 2 courses A grade of C or higher is required for ENG 151 and 152.	6	(3) ENG 151 Composition I (3) ENG 152 Composition II	C1 900 C1 901 R
Humanities (H) & Fine Arts (F) 1 course	3	Humanities (3) ENG 240 Intro. Shakespeare H3 905 (3) ENG 251 Intro. to Lit. H3 900 (3) ENG 253 World Lit. to 1650 H3 906 (3) ENG 254 World Lit. 1650 to Pres. H3 907 (3) ENG 255 British Lit. to 1800 H3 912 (3) ENG 256 British Lit. 1800 to Pres. H3 913 (3) ENG 260 Amer. Lit. to 1860 H3 914 (3) ENG 261 Amer. Lit. 1860 to Pres. H3 915 (3) ENG 270 Bible as Lit. H5 901 (3) ENG 271 Grk. & Rom. Myth. H9 901 (3) ENG 272 Non-Western Myth. H9 901 (3) ENG 275 Women's Lit. H3 911D (3) ENG 276 Asian Lit. H3 908N (4) FRE 252 Inter. French II H1 900 (4) GER 252 Inter. German II H1 900 (3) HUM 150 Hum. Through Arts HF 900 (3) PHI 151 Intro. to Philosophy H4 900 (3) PHI 155 Intro. to Logic H4 906 (3) PHI 160 Eastern Philosophy H4 903N (3) PHI 240 Philosophy of Religion H4 905 (3) PHI 251 Intro. to Ethics H4 904	Humanities cont'd. (3) PHI 261 Religions of World H5 904N (3) PHI 262 Found. Rel. Texts H5 901 (4) SPA 252 Inter. Spanish II H1 900 Fine Arts (3) ART 151 Art Appreciation F2 900 (3) ART 155 Non-Western Art F2 903N (3) ART 165 Ethnic Folk Art F2 906D (3) ART 171 Art Hist. I F2 901 (3) ART 172 Art Hist. II F2 902 (3) ART 173 Art Hist. III F2 902 (3) ART 175 Hist. of Photography F2 904 (3) HUM 150 Hum. Through Arts HF 900 (3) JRN 180 Intro. to Film F2 908 (3) MUS 151 Music Appreciation F1 900 (3) MUS 153 Intro. Non-West. Mus. F1 903N (3) MUS 154 Intro. to Am. Music F1 904 (3) MUS 171 Music Hist. I F1 901 (3) MUS 172 Music Hist. II F1 902 (3) THE 151 Intro. to Theatre F1 907
Social & Behavioral Sciences (S) 1 course ECO 251 generally is required for industrial engineering majors and recommended for other engineering specialties.	3	(3) ANT 151 Intro. to Anthropology S1 900N (3) ANT 155 Intro. to Archaeology S1 903 (3) ANT 160 Intro. Phys. Anthro. S1 902 (3) ANT 170 Intro. Cult. Anthropology S1 901N (3) ECO 150 Intro. Economics S3 900 (3) ECO 251 Microeconomics S3 902 (3) ECO 252 Macroeconomics S3 901 (3) GEG 202 Geography of the Developed World S4 901 (3) GEG 203 Geography of the Developing World S4 902N (3) GEG 204 Economic Geog. S4 903N (3) HIS 131 Western Civ. I S2 902 (3) HIS 132 Western Civ. II S2 903 (3) HIS 165 History of Latin Am. S2 910N (3) HIS 170 U.S. History I S2 900	(3) HIS 172 U.S. History III S2 901 (3) PLT 150 Intro. Pol. Thought S5 903 (3) PLT 151 U.S. Government S5 900 (3) PLT 155 State & Local Govt. S5 902 (3) PLT 251 Internat'l. Relations S5 904 (3) PLT 255 Comparative Govt. S5 905 (3) PSY 151 Intro. to Psychology S6 900 (3) PSY 250 Hum. Dev./Life Span S6 902 (3) PSY 251 Child Psychology S6 903 (3) PSY 255 Adult Development S6 905 (3) PSY 260 Intro. to Gerontology S6 905 (3) PSY 265 Social Psychology S8 900 (3) SOC 101 Marriage & Family S7 902 (3) SOC 151 Intro. to Sociology S7 900 (3) SOC 251 Social Problems S7 901 (3) SOC 260 Soc. of Race & Eth. S7 903D

Non-Western Cultures or Minority Cultures within the United States 1 course	3	(3) ANT 151 Intro. to Anthro. (3) ART 155 Non-Western Art (3) ART 165 Ethnic Folk Art (3) ANT 170 Intro. to Cultural Anthro. (3) ENG 275 Women's Lit. (3) ENG 276 Asian Lit. (3) GEG 203 Geog./Dev. World	S1 900N F2 903N F2 906D S1 901N H3 911D H3 908N S4 902N	(3) GEG 204 Economic Geography (3) HIS 165 History of Latin Am. (3) MUS 153 Intro. Non-West. Mus. (3) PHI 160 Eastern Philosophy (3) PHI 261 Religions of the World (3) SOC 260 Soc. of Race & Eth.	S4 903N S2 910N F1 903N H4 903N H5 904N S7 903D
Science 4 courses	13	(5) CHM 165 General Chem. I (4) PHY 291 Princ. of Physics I (4) PHY 292 Princ. of Physics II	P1 902L, CHM 911 P2 900L		
Mathematics 4 courses	16	(5) MAT 175 Calc./Anal. Geo. I (5) MAT 245 Calc./Anal. Geo. II (3) MAT 255 Calc./Anal. Geo. III (3) MAT 260 Differential Equations	M1 900-1, MTH 901 M1 900-2, MTH 902 M1 900-3, MTH 903 MTH 912		
Computer Science 1 course Selection depends on student's specialty.	3-4	(4) CSC 121 Computer Science I or (3) CIS 117 Intro. to Programming	CS 911		
Engineering Specialty 12-21 semester hours	12-21	(5) CHM 166 General Chemistry II (5) CHM 265 Organic Chemistry I (5) CHM 266 Organic Chemistry II (4) CSC 122 Computer Science II	CHM 912 CHM 913 CHM 914 CS 912	(4) EGR 151 Engineering Graphics (3) EGR 251 Statics (3) EGR 252 Dynamics (4) EGR 260 Circuit Analysis (4) PHY 293 Princ. of Physics III	EGR 941 EGR 942 EGR 943 EGR 931L
Total Degree Requirements	60-68				

The IAI Engineering Advisory Committee recommends the following engineering specialty courses **for students who are undecided about their baccalaureate transfer institution**. Baccalaureate engineering programs vary from one institution to another, so it is important to identify potential transfer institutions early and to follow their catalogs carefully for required courses. **Students should meet with an MCC academic advisor for guidance to avoid taking unnecessary or redundant courses.**

Civil/Mechanical/Industrial

EGR 151 Eng. Graphics
EGR 251 Statics
EGR 252 Dynamics

Chemical Engineering

CHM 166 Gen. Chem. II
CHM 265 Organic Chem. I
CHM 266 Organic Chem. II

Computer Engineering

CSC 121 Comp. Science I
CSC 122 Comp. Science II
EGR 260 Circuit Analysis

Electrical Engineering

EGR 260 Circuit Analysis
CSC 121 & 122 Comp. Sci. I & II
or
CIS 117 Intro. to Programming

Other AES Graduation Requirements:

- Total of 60-68 credit hours
- 2.0 minimum cumulative GPA at MCC on completion of degree
- 15 semester hours taken at MCC
- Completion of General Education Assessment exit test
- Completion of Intent to Graduate Form

Degree Notes:

- No single course can be used to meet two different requirements.
- Baccalaureate engineering programs vary. Consult the catalog of the intended transfer institution for required courses. To meet baccalaureate prerequisites, students can request a course substitution approval for an AES degree requirement. Please see an academic advisor for course selection.
- It is recommended that course sequences be completed at MCC before transferring, since topics are covered in different orders by different schools.
- Students should contact their transfer school as soon as possible for evaluation of their MCC credits.
- Acceptance of a D grade and non-traditional credit (CLEP, AP, DANTEs, military service, proficiency exam) varies from institution to institution.