

Requirements for Associate in Engineering Science (AES) Degree

The AES degree provides pre-engineering students with the opportunity 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 IAI General Education Core Curriculum (IAI GECC). In order to take courses in a similar pattern to those of freshman and sophomore students in the field of engineering at a university, some general education courses are postponed to the junior and senior years. After transfer, students will either complete general education requirements of the institution to which they transfer or be given the opportunity to complete the IAI GECC at the transfer school. **It is important to work closely with an MCC advisor and your transfer school.**

The following requirements apply to students who first enrolled for Fall 2009 or later. Students who first enrolled prior to Fall 2009 should contact an advisor for more information.

Curriculum: BAC 050	Credit Hours				
Communications (C) 2 courses. A grade of "C" or better is required for ENG151 and 152.	6	(3) ENG 151 Composition I (3) ENG 152 Composition II	C1 900 C1 901R		
Humanities (H) and Fine Arts (F) 1 course.	3	Humanities (3) ENG 240 Intro. to Shakespeare (3) ENG 251 Intro. to Lit. (3) ENG 253 World Lit. to 1650 (3) ENG 254 World Lit. 1650 to Present (3) ENG 255 British Lit. to 1800 (3) ENG 256 British Lit. 1800 to Present (3) ENG 260 American Lit. to 1860 (3) ENG 261 American Lit. 1860 to Present (3) ENG 270 Bible as Lit. (3) ENG 271 Greek & Rom. Myth. (3) ENG 272 Non-Western Myth. (3) ENG 275 Women's Lit. (3) ENG 276 Asian Lit. (4) FRE 252 Inter. French II (4) GER 252 Inter. German II (3) HUM 150 Hum. through Arts (3) PHI 151 Intro. to Philosophy (3) PHI 155 Intro. to Logic (3) PHI 160 Eastern Philosophy (3) PHI 251 Intro. to Ethics	H3 905 H3 900 H3 906 H3 907 H3 912 H3 913 H3 914 H3 915 H5 901 H9 901 H9 901 H3 911D H3 908N H1 900 H1 900 HF 900 H4 900 H4 906 H4 903N H4 904	(3) PHI 261 Religions of the World (3) PHI 262 Foundational Rel. Texts (4) SPA 252 Inter. Spanish II Fine Arts (3) ART 151 Art Appreciation (3) ART 155 Non-Western Art (3) ART 165 Ethnic Folk Art (3) ART 171 Art Hist. I (3) ART 172 Art Hist. II (3) ART 173 Art Hist. III (3) ART 175 Hist. of Photography (3) HUM 150 Hum. through Arts (3) JRN 180 Intro. to Film (3) MUS 151 Music Appreciation (3) MUS 153 Intro. Non-Western Music (3) MUS 154 Intro. to Am. Music (3) MUS 171 Music Hist. I (3) MUS 172 Music Hist. II (3) THE 151 Intro. to Theatre	H5 904N H5 901 H1 900 F2 900 F2 903N F2 906D F2 901 F2 902 F2 902 F2 904 HF 900 F2 908 F1 900 F1 903N F1 904 F1 901 F1 902 F1 907
Social & Behavioral Sciences (S) 1 course. (ECO 251 is generally required for Industrial Engineering majors and recommended for other engineering specialties.)	3	(3) ANT 151 Intro. to Anthro. (3) ANT 155 Intro. to Archaeology (3) ANT 160 Intro. to Physical Anthropology (3) ANT 170 Intro. to Cultural Anthropology (3) ECO 150 Intro. to Economics (3) ECO 251 Microeconomics (3) ECO 252 Macroeconomics (3) GEG 202 Geo./Developed World (3) GEG 203 Geo./Developing World (3) GEG 204 Economic Geog. (3) HIS 131 Western Civilization I (3) HIS 132 Western Civilization II (3) HIS 165 History of Latin Am. (3) HIS 170 U. S. History I (3) HIS 172 U. S. History III	S1 900N S1 903 S1 902 S1 901N S3 900 S3 902 S3 901 S4 901 S4 902N S4 903N S2 902 S2 903 S2 910N S2 900 S2 901	(3) PLT 150 Intro. to Political Thought (3) PLT 151 U. S. Government (3) PLT 155 State and Local Govt. (3) PLT 251 Internat'l Relations (3) PLT 255 Comparative Govt. (3) PSY 151 Intro. to Psychology (3) PSY 250 Human Dev./Life Span (3) PSY 251 Child Psychology (3) PSY 255 Adult Development (3) PSY 260 Intro. to Gerontology (3) PSY 265 Social Psychology (3) SOC 101 Marriage & Family (3) SOC 151 Intro. to Sociology (3) SOC 251 Social Problems (3) SOC 260 Soc. of Race & Ethnicity	S5 903 S5 900 S5 902 S5 904 S5 905 S6 900 S6 902 S6 903 S6 905 S6 905 S8 900 S7 902 S7 900 S7 901 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 Anthropology (3) ENG 275 Women's Lit. (3) ENG 276 Asian Lit. (3) GEG 203 Geog./Developing 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-Western Music (3) PHI 160 Eastern Philosophy (3) PHI 261 Religions of the World (3) SOC 260 Soc. of Race & Ethnicity	S4 903N S2 910N F1 903N H4 903N H5 904N S7 903D

	Credit Hours	
Science 4 courses.	17	(5) CHM 165 General Chem. I CHM911 (4) PHY 291 Princ. of Physics I (4) PHY 292 Princ. of Physics II (4) PHY 293 Princ. of Physics III
Mathematics 4 courses.	16	(5) MAT 175 Calc./Anal. Geo.I MTH901 (5) MAT 245 Calc./Anal. Geo.II MTH902 (3) MAT 255 Calc./Anal. Geo. III MTH903 (3) MAT 260 Differential Equations MTH912
Computer Science Choose 1 course. (course selection depends on your specialty)	3-4	(4) CSC 121 Computer Science I CS911 or (3) CIS 117 Intro. to Programming
Engineering Specialty Courses Choose between 8 – 17 semester hours of course work.	8 -17	(5) CHM 166 General Chemistry II CHM912 (5) CHM 265 Organic Chemistry I CHM913 (5) CHM 266 Organic Chemistry II CHM914 (4) CSC 122 Computer Science II CS 912 (4) EGR 151 Engineering Graphics I EGR 941 (3) EGR 251 Statics EGR 942 (3) EGR 252 Dynamics EGR 943 (4) EGR 260 Circuit Analysis EGR 931L
Total Credits	60-68	

The IAI Engineering Advisory Committee recommends the following engineering specialty courses **for students who are undecided about a 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. **Meet with an advisor for guidance so that no unnecessary or redundant coursework is taken.**

Civil/ Mechanical/Industrial

EGR151 Eng Graphics I
EGR251 Statics
EGR252 Dynamics

Chemical Engineering

CHM166 Gen Chem II
CHM265 Organic Chem I
CHM266 Organic Chem II

Computer Engineering

CSC121 Comp Science I
CSC122 Comp Science II
EGR260 Circuit Analysis

Electrical Engineering

EGR260 Circuit Analysis
CSC121 & 122 Comp Sci I & II
or
CIS117 Intro to Programming

Other Graduation Requirements:

- Total of 60 - 68 credit hours
- 2.0 grade point average
- 15 semester hours taken at MCC
- Completion of the General Education Assessment exit test

Degree Notes:

- Credit hours are shown in parentheses in front of the course number.
- IAI General Education Core Curriculum and Baccalaureate Major course numbers are in bold to the right of the MCC course numbers and titles (e.g. C1 900, EGR 961). Please see an advisor for more information about IAI course equivalencies.
- No single course can be used to meet 2 different requirements.
- It is important that all courses in a sequence be taken at the same institution.
- Work with an MCC advisor and contact your transfer school as soon as possible for review and evaluation of your MCC credits.
- Acceptance of non-traditional credit (CLEP, AP, DANTES, military service, proficiency exam) varies from institution to institution.
- Students must apply for graduation and pay the graduation fee at the beginning of their last semester through the Registration Office. An official degree audit will follow.