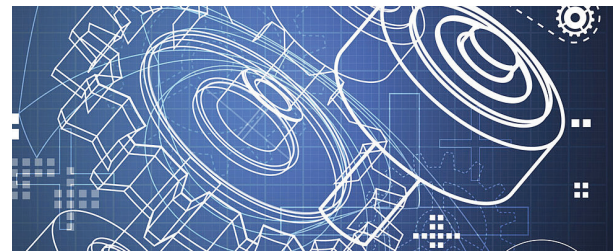


Sample Education Plan Associate in Engineering Science (AES)



This is a SAMPLE plan to help guide you toward courses relevant to your interests while you are deciding on a transfer institution. Please note that requirements vary among four-year colleges and universities; check early with your transfer school and academic advisor to ensure you are taking appropriate courses and meeting all requirements.

AES Degree Requirements

Students are encouraged to complete an AES degree prior to transfer. A minimum of 60 credits is required for transfer as a junior into a bachelor's degree engineering program. Please refer to MCC's AES degree planning sheet in the current academic catalog for specific degree requirements and course options.

GENERAL EDUCATION COURSE REQUIREMENTS	CREDITS	OTHER COURSE REQUIREMENTS	CREDITS
Communications		Engineering Electives for Specific Majors	
^ENG 151 Composition I	3	Requirements vary among four-year schools.	
^ENG 152 Composition II	3	This is a SAMPLE plan. (select courses with your advisor).	
Humanities and Fine Arts		Aeronautical/ Engineering Mechanics/ Civil/Industrial/Manufacturing/Mechanical Engineering	
IAI Humanities or Fine Arts	3	EGR 151 Engineering Graphics	4
Social and Behavioral Sciences		^EGR 251 Statics	3
IAI Social & Behavioral Science (Recommended— ECO 251 for Industrial Engineering)	3	^EGR 252 Dynamics	3
Non-Western Cultures or Minority Cultures Within US		^EGR 260 Circuit Analysis (not Civil or Industrial)	4
See current MCC catalog for course options	3	^PHY 293 Principles of Physics III (not Civil or Industrial)	4
Sciences		Chemical Engineering	
^CHM 165 General Chemistry I	5	^CHM 166 General Chemistry II	5
^PHY 291 Principles of Physics I	4	^CHM 265 Organic Chemistry I	5
^PHY 292 Principles of Physics II	4	^CHM 266 Organic Chemistry II	5
Mathematics		Computer/Electrical Engineering	
^MAT 175 Calculus w/Analytic Geometry I	5	^CSC 122 Computer Science II	4
^MAT 245 Calculus w/Analytic Geo. II	5	^EGR 260 Circuit Analysis	4
^MAT 255 Calculus w/Analytic Geo. III	4	^PHY 293 Principles of Physics III	4
^MAT 260 Differential Equations	3	Bioengineering	
Computer Science		^BIO 157 Fundamentals of Biology (this does not fulfill an AES requirement)	
^CSC 121 Computer Science	4	^CHM 166 General Chemistry II	5
		^EGR 260 Circuit Analysis	4
		^PHY 293 Principles of Physics III	4
		Other Electives	
		Foreign Language	0–16
		Total Credits Required for AES Degree	
		Many 4-year schools will accept a maximum of 60–68 transfer credits.	60–68

^Course has prerequisite(s)—Please reference the current academic catalog for prerequisites.

NOTE:

- **Mathematics and science course selection will depend on your transfer school. Requirements vary among four-year schools.**
- Content may vary between institutions, so completing a sequence (e.g. MAT 175, MAT 245, and MAT 255) at a single institution is the best way to assure that neither credit nor content is lost in transfer.
- Your transfer school may require at least 1 year of foreign language. High school foreign language may or may not count. It is always recommended that the foreign language requirement be completed prior to transfer.
- **Not all courses are offered each semester. Be sure to work with an MCC advisor on a two year plan.**

For more information:
advising@mchenry.edu or (815) 479-7565
www.mchenry.edu/advising





Transfer Notes

The Associate in Engineering Science degree allows pre-engineering students to complete a significant portion of lower-level baccalaureate degree courses prior to transfer. Bachelor's degree engineering programs are highly structured and require extensive, sequential mathematics and science courses at the lower level. Engineering programs vary from one institution to another. **It is important that students work closely with an MCC academic advisor and their transfer school.**

Admission and specific course requirements for baccalaureate engineering programs vary among four-year institutions. Competency through the second, third, or fourth semester of a single foreign language may be an admission or a graduation requirement. Ask about the language requirement of the schools you are considering, and complete the required foreign language courses before transfer. In some cases, two years of foreign language study in high school will substitute for two semesters in college.

Engineering vs. Engineering Technology*		
	Engineering	Engineering Technology
Focus	Theory and conceptual design	Application and implementation
Requirements	Higher-level math and science: <i>multiple semesters of calculus; calculus-based theoretical science courses; engineering science, analysis and design courses</i>	Less in-depth math and science; more practical than theoretical: <i>algebra, trigonometry, applied calculus, university-level science</i>
Job Title	Engineer	Technologist (4-yr degree) or Technician (2-yr degree)
Career	Industry, research and development, conceptual design, academia	Construction, manufacturing, product design, testing, or technical services and sales.

*Modified from the website of the Accrediting Board for Engineering and Technology (ABET).

Transfer Schools

Following is a sample of Illinois public and private four-year institutions that offer engineering programs.

- Bradley University
- Illinois Institute of Technology
- Northern Illinois University
- Northwestern University
- Southern Illinois University at Carbondale
- Southern Illinois University at Edwardsville
- *University of Illinois at Chicago
- University of Illinois at Urbana/Champaign
- Western Illinois University

***Transfer Admission Guarantee (TAG):** The University of Illinois at Chicago TAG Program offers guaranteed admission into undergraduate majors in the College of Engineering. MCC students who apply to the program through the TAG Participation Form and maintain a 3.0 cumulative GPA receive counseling and benefits that exceed those of a regular transfer student and the opportunity for guaranteed admission. For detailed information, see your MCC academic advisor and refer to this website: <http://tag.uic.edu>.

Transfer Resources

www.itransfer.org—iTransfer is a portal for transfer assistance in the state of Illinois. Find information about the Illinois Articulation Initiative and MyCreditsTransfer (Transferology—a nationwide transfer tool).

www.mchenry.edu/transfer—Find transfer guides, course equivalencies, partnership agreements, and other transfer resources.