

# BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING



## UNIVERSITY OF MISSOURI – ST. LOUIS & SOUTHWESTERN ILLINOIS COLLEGE TRANSFER GUIDE



This Guide is intended for the use of students who plan on transferring from Southwestern Illinois College (SWIC) to the University of Missouri – St. Louis (UMSL) to pursue a Bachelor of Science in Electrical Engineering through the UMSL/Washington University (WUSTL) Joint Engineering Program. This guide is intended for use under advisement of a UMSL Transfer Coordinator.

The UMSL/WUSTL Joint Engineering Program offers UMSL students the opportunity to pursue a variety of engineering degree options while taking advantage of the resources, facilities, and faculty provided at WUSTL. The upper-division engineering courses are offered in the evenings and on Saturdays on the WUSTL campus and are taught by WUSTL faculty. This schedule permits students to co-op during the day at local engineering firms. Tuition for the engineering courses is the UMSL tuition rate with a small additional fee. Students of this program are also able to utilize student services provided by both institutions. For more information on the UMSL/WUSTL Joint Engineering Program, please visit their [website](#).

### PRE-ENGINEERING SEQUENCE

The following requirements must be completed for a student to be eligible to take formal Engineering courses through the UMSL/WUSTL Joint Engineering Program. These requirements may be completed at either UMSL or SWIC and included here are any SWIC courses that fulfill corresponding requirements. Unless stated otherwise, all pre-engineering courses must be completed with a C- grade or higher to fulfill the requirements of this program.

- A student must earn a 2.75 GPA over this sequence of pre-engineering courses.
- Chemistry - CHEM 105 General Chemistry I (5)
- Calculus I, completed a C grade or higher - MATH 203 Analytic Geometry & Calculus I (5)
- Calculus II - MATH 204 Analytic Geometry & Calculus II (5)
- Calculus III - MATH 205 Analytic Geometry & Calculus III (5)
- Differential Equations - MATH 290 Differential Equations (3)
- Calculus-Based Physics I - PHYS 204 Physics – Mechanics (4)
- Calculus-Based Physics II - PHYS 205 Physics – Heat, Elec & Magnetism (4)
- Engineering-Statics - ENGR 263 Analytical Mechanics-Statics (3)
- Engineering-Dynamics - ENGR 264 Analytical Mechanics-Dynamics (3)

### GENERAL EDUCATION

The following are the general education requirements of the UMSL/WUSTL Joint Engineering Program. It is recommended that the student complete these requirements while completing those above in the pre-engineering sequence. Included here are any SWIC courses that fulfill corresponding requirements.

- First-Year Writing - Complete 1 course from the following with C- grade or higher:
  - ENG 101 Rhetoric & Composition I (3)
  - ENG 102 Rhetoric & Composition II (3)
- Engineering Ethics - This course must be completed at UMSL.
- Philosophy of Science - This course must be completed at UMSL.
- American History - Complete 1 course from the following:
  - HIST 180 U.S. History to 1865 (3)
  - HIST 181 U.S. History, 1865 to the Present (3)

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☐ Cultural Diversity Social Science - Complete 1 course from the following:

ANTH 150 Cultural Anthropology (3)  
ANTH 210 Native American Cultures (3)  
ANTH 250 Introduction to Archaeology (3)  
HIST 114 Latin American History (3)

HIST 115 Mid-East History (3)  
HIST 117 African History (3)  
HIST 118 Asian History (3)

☐ ☐ Additional Social Science - Complete 2 of the following courses in addition to those already completed for above requirements:

Any **ANTH** Courses

Any **ECON** Courses

Any **HMS** Courses

Any **POLS** Courses

Any **PSYC** Courses (Exceptions: Not *PSYC 200* and *PSYC 252*)

Any **SOC** Courses

AOJ 100 Intro to Administration of Justice (3)

AOJ 103 Introduction to Corrections (3)

AOJ 105 Police Administration (3)

AOJ 153 Juvenile Delinquency (3)

AOJ 155 Community Policing (3)

AOJ 156 Issues in Criminal Justice (3)

AOJ 160 Criminology (3)

AOJ 203 Criminal Law & Admin. of Justice (3)

AOJ 251 Rules of Criminal Evidence (3)

AOJ 252 Organized Crime (3)

AOJ 261 Probation and Parole (3)

AOJ 299 Spec Topics In Admin of Justice (1-4)

GEOG 151 Geography of the United States and  
Canada (3)

GEOG 152 World Regional Geography (3)

GEOG 202 Economic Geography (3)

MGMT 117 Personal Finance (3)

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For any questions regarding this guide please contact the UMSL Office of Transfer Services at (314) 516-5162.