This Guide is intended for the use of students who plan on transferring from Mineral Area College (MAC) to the University of Missouri – St. Louis (UMSL) to pursue a Bachelor of Science in Mechanical Engineering through the UMSL/Washington University (WUSTL) Joint Engineering Program. This guide is intended for use under advisement of a UMSL Student Recruitment Specialist.

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 evening and on Saturdays on the WUSTL campus and are taught by the 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 MAC and included here are any MAC 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 – PHS 1350 General Chemistry I (MOTR CHEM 150L) (5)
- Calculus I, completed with a C grade or higher – MAT 1650 Analytic Geometry and Calculus I (5)
- Calculus II - MAT 2150 Analytic Geometry and Calculus II (5)
- Calculus III - MAT 2250 Analytic Geometry and Calculus III (5)
- Differential Equations - MAT 2330 Differential Equations (3)
- Calculus-Based Physics I – PHS 2230 General Physics I (MOTR PHYS 200L) (4)
- Calculus-Based Physics II – PHS 2240 General Physics II (4)
- Engineering-Statics – EGN 2130 Engineering Mechanics I - Statics (3)
- Engineering-Dynamics – EGN 2230 Engineering Mechanics II - 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 SCCC courses that fulfill corresponding requirements.

- First-Year Writing - Complete the following courses (ENG 1340 English Composition II with a C- or better)
  - ENG 1330 English Composition I (MOTR ENGL 100) (3)
  - ENG 1340 English Composition II (MOTR ENGL 200) (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:
  - HIS 1230 American History I (MOTR HIST 101) (3)
  - HIS 1240 American History II (MOTR HIST 102) (3)
- Cultural Diversity Social Science – SOC 1540 Intro to Cultural Anthropology (MOTR ANTH 201) (3)
- Additional Social Science – Complete 2 additional Science courses from MOTR list *If additional social science course is SOC the final must be from another area of study

*Students seeking to major in engineering are first designated as ‘Undeclared with an interest in Engineering majors’ until they have completed Math 1800 Analytical Geometry & Calculus I. Upon successful completion of Math 1800 with a grade of C or better, students will be allowed to declare pre-engineering as their major. Math 1800 must be completed successfully within two attempts.