

# **UNIVERSITY OF MISSOURI-ST. LOUIS\WASHINGTON UNIVERSITY JOINT UNDERGRADUATE ENGINEERING PROGRAM GUIDE**

Bachelor of Science in Electrical Engineering  
Bachelor of Science in Mechanical Engineering

The University of Missouri-St. Louis\Washington University Joint Undergraduate Engineering Program was established on December 28, 1992, to expand the opportunities for undergraduate engineering education available in the St. Louis area by combining the strengths and resources of the University of Missouri-St. Louis and Washington University. The program now offers Bachelor of Science degrees in Civil, Mechanical, and Electrical Engineering, as well as a Minor in Environmental Engineering Science. All degree programs are ABET accredited.

The program is consistent with the mission of UM-St. Louis; to provide high quality education that will enhance the occupational and professional careers of citizens in the entire region, including minorities and the economically disadvantaged, and to provide a well-trained, sophisticated work force for the St. Louis area. The partnership also continues Washington University's strong tradition of working with a diversity of institutions in education, government, and the private sector; it is also a way for Washington University to share its campus, resources, and personnel with the citizens of Missouri.

This joint engineering degree program is new, but it rests on solid foundations laid years ago. At the University of Missouri-St. Louis, a pre-engineering curriculum has been in place for well over a decade. At Washington University, the School of Engineering and Applied Science has had over 100 years of experience in engineering research and education. By working together in a unique public/private partnership, the two universities offer an innovative degree path found nowhere else in the country.

Students who enter the program will take about one-half of the course work required for their engineering degrees -- mathematics, physics, chemistry, humanities, and social science, and some elementary engineering subjects -- on the campus of St. Charles Community College. The remaining half of the degree program, consisting of 66-72 semester hours in upper-level engineering courses and laboratories, is offered in the evening on the campus of Washington University and taught by Washington University engineering faculty members. At Washington University, the roughly 1,000 full-time undergraduate engineering students extensively use the excellent laboratory facilities and equipment during the daytime hours. However, the same facilities remain virtually unused by Washington University students in the evening hours. The Joint Undergraduate Engineering Program makes these facilities available in the evening to students in civil, electrical, and mechanical engineering. Students register for all their upper-level engineering courses at UM-St. Louis and pay educational fees at UM-St. Louis rates. Students may attend part-time or full-time.

Each upper-division student has an engineering faculty advisor at Washington University. Students have access to a wide range of facilities and services on the Washington University campus, as well as to the full range of facilities and services at UM-St. Louis. In addition to classrooms and laboratories, students in this program rely on the Washington University library system, engineering computing facilities, and engineering placement offices. Students receive their undergraduate engineering degrees from the University of Missouri-St. Louis.

UNIVERSITY OF MISSOURI-ST. LOUIS  
AND  
ST. CHARLES COMMUNITY COLLEGE

**ELECTRICAL AND MECHANICAL ENGINEERING**

**FIRST SEMESTER**

**SCC**

ENG 101 Eng Comp I (3)      *Eng 1100*  
\*MAT 180 Calculus I (5)      *Math 1800*  
CHM 110 & 113 Gen. Chem I (4)      *Chm 1111A&B*

Hours: (12)

**UMSL Equiv.**

**SECOND SEMESTER**

**SCC**

MAT 230 Calc II (5)      *Math 1900*  
CHM 111/114 Gen.Chem II (4)      *Chem1121A&B*  
POL 101 Am. Govt. (3)      *Pol Sci 1100*  
or ECO 120 Macro (3)      *Econ 1001*

Hours: (12)

**UMSL Equiv.**

**THIRD SEMESTER**

**SCC**

MAT 240 Calc. III (5)      *Math 2000*  
PHY 240 & 243 Col Phys I (5)      *Phys 2111 A&B*  
HIS 101 Am Hist to 1877 (3)      *Hst 1001*  
or HIS 102 Am Hist since 1877 (3)      *Hst 1002*  
\*\*Humanities course (3)

Hours: (16)

**UMSL Equiv.**

**FOURTH SEMESTER**

**SCC**

MAT 250 Diff Equ. (3)      *Math 2020*  
PHY 241 & 244 Col Phys II (5)      *Phys 2112 A&B*  
EGR 170 (3)      *Enginr 2310*  
ANT 102 Int. to Cult. Anth (3)      *Anthro 1011*

Hours: (14)

**UMSL Equiv.**

**SUMMER SEMESTER**

**SCC**

EGR 210 (3)

Hours: (3)

**UMSL Equiv.**

*Enginr 2320*

**DEGREE NOTES:**

\* = Prerequisite: MAT 171 or MAT 160 and MAT 150

\*\* = Select a Humanities course from approved General Education sheet (Philosophy course recommended)

**CONTACT INFORMATION:**

**NOTE: IT IS IMPORTANT TO CONTACT THE UM-ST. LOUIS TRANSFER COORDINATOR EACH SEMESTER**  
SCC-Elizabeth Higgins, UM-St. Louis Transfer Coordinator, in room 2123 Administration Bldg., 636-922-8241

For additional information, contact Mary McManus in the UMSL/Washington University Engineering Department, 228 Benton Hall, 314-516-7018.