

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

ASSOCIATE OF ARTS LEADING TO BACHELOR OF SCIENCE IN

**PHYSICS\***

**FIRST SEMESTER**  
**SCC**

\*MAT 180 Calc I (5)  
State Req./Social Science (3)  
Humanities (Group I) (3)  
ENG 101 Comp I (3)  
COL 101 Orient to College (1)

Hours: (15)

**UMSL Equiv.**

*Math 1800*  
  
*Eng 1100*

**SECOND SEMESTER**  
**SCC**

MATH 230 Calc II (5)  
Biological Science (Group I) (3-4)  
ENG 102 Comp II (3)  
Humanities (Group II) (3)  
SPE 101 Oral Com (3)

Hours: (17-18)

**UMSL Equiv.**

*Math 1900*  
  
*Approved Elective  
Com 1040*

**THIRD SEMESTER**  
**SCC**

MATH 240 Calc III (5)  
Social Science (Group II) (3)  
PHY 240 & 243 Coll Physics I (5)  
#Multicultural/Value (3)

Hours: (16)

**UMSL Equiv.**

*Math 2000*  
  
*Phy 2111 A&B*

**FOURTH SEMESTER**  
**SCC**

CPT 115 Intro to D.P. (3)  
PHY 241 & 244 Coll. Phys. II (5)  
Social Science (Group I or II) (3)  
Humanities (Group I or II) (3)  
COL 299 Capstone (1)

Hours: (15)

**UMSL Equiv.**

*BA 1800*  
*Phy 2112 A & B*

**FIFTH SEMESTER**  
**UMSL**

English 3100 Adv Expository Writing (3)  
Physics 1099 Windows on Physics (1)  
Physics 3200 Survey of Theoretical Physics (3)  
Physics 3231 Intro to Modern Physics (3)  
CS 1250 Intro to Computer Science (3)  
Math 2020 Differential Equations (3)

**SEVENTH SEMESTER**  
**UMSL**

Physics 4331 Intro to Quantum Mechanics (3)  
Physics 4310 Modern Electronics (3)  
Physics 43xx Physics elective (3)  
Math 4030 or 4230 Appl. Math or Num Anal I (3)  
\*\*Chemistry 1121 (5)

Hours: (17)

**SIXTH SEMESTER**  
**UMSL**

Physics 3221 Mechanics (3)  
Physics 3223 Electricity & Magnetism (3)  
Math 2450 Elem Linear Algebra (3)  
Math / CS 2xxx Math / CS elective (3)  
Astro 1050 or 1051 Intro to Astronomy (3)  
Chemistry 1111 (5)

Hours: (20)

**EIGHTH SEMESTER**  
**UMSL**

Physics 4341 Thermal & Statistical Physics (3)  
Physics 4311 Advanced Lab (3)  
Physics 4323 Modern Optics (3)  
Physics 43xx (2) Physics electives (6)  
Math/CS 3000 Level (3)

Hours: (18)

**NOTE: See back page for additional information.**

**DEGREE NOTES:**

\*Students begin their math sequence based on the results of SCC Math Placement Test

\*\*May be optional depending upon the area of emphasis

#Courses that fulfill UMSL's Cultural Diversity Requirement: ANT 102, GEO 101, HST 201, GLC 170 or 180, PHL 201.

There are four physics options for the Bachelor of Science Degree. They are General Physics, Astrophysics, Engineering Physics and Medical Physics as well as an Optical Physics option, which allows students to complete their BS in Physics and Doctor of Optometry in seven years. To discuss which option is best, the student should meet with the Department Faculty Advisor Dr. Ta Pei Cheng.

120 hours required for the BS in Physics

Student completing a degree from a MO community college that includes a CBHE approved general education core will be allowed transfer credit of more than 64 hours only if the additional lower division credits are applicable to the baccalaureate degree or are prerequisites for upper division courses in the major.

Maximum of 60 hours may transfer without AA

Please seek advisement from your SCC Academic Advisor for assurance of AA completion

**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 Ta Pai Cheng in the UM-St. Louis Physics Department, 503J Benton Hall, 314-516-5931 or [tpcheng@umsl.edu](mailto:tpcheng@umsl.edu).