

**ASSOCIATE IN SCIENCE
TO A
BACHELOR OF SCIENCE IN PHYSICS**



**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) with a completed Associate in Science to the University of Missouri – St. Louis (UMSL) to pursue a Bachelor of Science in Physics.

This Bachelors degree offers Emphasis options in the following areas: General Physics, Astrophysics, Engineering Physics, and Medical Physics. Unless specified below, the courses recommended in this guide will be applicable to all of these Emphases. For more information on UMSL's Bachelor of Science in Physics, please visit our online [Course Catalog](#).

The following are the requirements of the SWIC Associate in Science degree program as they are recommended for students intending to continue on into UMSL's Bachelor of Science in Physics. Completing these requirements as they are recommended here will maximize the transferability of a student's coursework toward their UMSL Bachelors degree. Further details of this Associates degree program, as well as comprehensive lists of courses that satisfy each General Education component, may be found within the SWIC course catalog or may be obtained through a SWIC advisor.

This guide is intended for use under advisement of a SWIC Academic Advisor or UMSL Transfer Specialist and is not considered to be substitution of such advisement.

Communications 9 Hours

- ENG 101 Rhetoric & Composition I (3)
- ENG 102 Rhetoric & Composition II (3)
- SPCH 151 Fundamentals of Public Speaking (3)

1 Course of the following Humanities and Social/Behavioral Science Courses must be selected to also satisfy the SWIC Human Relations requirement.

1 Course of the following Humanities and Social/Behavioral Science Courses must be selected to also satisfy both SWIC's Non-Western Culture requirement and UMSL's Cultural Diversity requirement chosen from:

- | | |
|-------------------------------------|--|
| ANTH 150 Cultural Anthropology (3) | HIST 118 Asian History (3) |
| HIST 114 Latin American History (3) | LIT 205 Lit of Non-Western Countries (3) |
| HIST 115 Mid-East History (3) | MUS 110 World Music (3) |
| HIST 117 African History (3) | PHIL 155 Non-Western Philosophy (3) |

General Humanities 3 Hours

Complete 1 course in General Humanities: _____

Humanities - Fine Arts 3 Hours

Complete 1 course in Humanities - Fine Arts: _____

Social Science 3 Hours

Complete 1 course in Social Science: _____

Behavioral Science 3 Hours

Complete 1 course in Behavioral Science: _____

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Mathematics 10 Hours

- MATH 203 Analytic Geometry & Calculus I (5)
- MATH 204 Analytic Geometry & Calculus II (5)

Life Science 4 Hours

- BIOL 101 Principles of Biology I (4)

Physical Science 4 Hours

- PHYS 204 Physics - Mechanics (4)

Additional Science 4 Hours

- PHYS 205 Physics - Heat, Elec & Magnetism (4)

Additional Math or Science 5 Hours

- CHEM 105 General Chemistry I (5)

Human Well-Being 2 Hours

- HRO 150 Fundamentals of Nutrition (2)

Electives 15-16 Hours

A student must complete enough Elective Coursework to reach 64 Total Hours:

- MATH 112 College Algebra (4)
- MATH 114 Trigonometry (3)
- MATH 205 Analytic Geometry & Calculus III (5)
- Complete 1 of the following courses:
 - CIS 250 C++ Programming I (3)
 - MATH 170 Computer Science I - C++ (4)
 - MATH 210 Computer Programming for Engineers (3)

Students that plan to transfer to UMSL to pursue a Bachelor of Science in Physics but do not wish to complete an Associates degree at SWIC should focus on completing the **Highlighted Courses** above in conjunction with those outlined in the [SWIC General Education Transfer Guide](#).

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