

Physics, Undergraduate General Requirements

Undergraduate Studies

Declaring the Physics Major

Students seeking to major in physics are first designated as 'pre-physics majors' until they have completed both PHYSICS 2111 and PHYSICS 2112 or equivalent courses. Upon successful completion of PHYSICS 2111 and PHYSICS 2112 with grades of **C** **C-** or better, students will be allowed to declare physics as their major. Each of these courses must be completed successfully within two attempts.

Degree Requirements

All physics majors in all programs must complete the physics core curriculum with the exception that majors pursuing the Physics Education option are not required to take PHYSICS 1099 and CMP SCI 1250. In addition to the core courses, each individual program has its own specific requirements. Required Physics, Mathematics, Chemistry, Biology, Optometry and Computer Science courses for a major or minor in physics may not be taken on a satisfactory/unsatisfactory grading basis.

Core Curriculum

The following physics courses are required: 23

PHYSICS 1099	Windows on Physics
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PHYSICS 2111	Physics: Mechanics and Heat (MOTR PHYS 200L)
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PHYSICS 2111L	Mechanics and Heat Laboratory
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PHYSICS 2112	Physics: Electricity, Magnetism, and Optics
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PHYSICS 2112L	Electricity, Magnetism, and Optics Laboratory	
PHYSICS 3200	Mathematical Methods of Theoretical Physics	
PHYSICS 3221	Mechanics	
PHYSICS 3223	Electricity and Magnetism	
PHYSICS 3231	Introduction to Modern Physics I	
Also required are:		26
MATH 1800	Analytic Geometry and Calculus I	
MATH 1900	Analytic Geometry and Calculus II	
MATH 2000	Analytic Geometry and Calculus III	
MATH 2020	Introduction to Differential Equations	
CHEM 1111	Introductory Chemistry I (MOTR CHEM 150L)	
CMP SCI 1250	Introduction to Computing	
Total Hours		49

Note: Students are urged to begin the calculus sequence [MATH 1800, Analytic Geometry and Calculus I] as soon as possible to avoid delays in graduation.

Students with experience in digital computer programming may be excused from CMP SCI 1250.

Sign-offs from other departments affected by this proposal

None

Rationale

In order to align department standards with other programs at UMSL and other physics programs around the country, we wish to make it required that students must pass all required core physics courses for their track with a C- or better.