

Physics Major

Associate Professor: L. Stumpe

Contact: Laura Stumpe

Email: laura.stumpe@wcmo.edu

The Department of Mathematics and Physics offers a major and a minor program of study in physics. Physicists seek a description of nature in terms of its most fundamental entities. They study systems ranging in size and complexity from quarks to the universe itself. The offerings of the department are planned to meet the following needs: (1) general cultural knowledge, (2) specific group requirements for majors in other departments, (3) basic subject matter for those preparing to enter various branches of engineering or other technical schools, and (4) a major in physics, for those intending to enter industry or to continue in graduate school.

Because of the emphasis placed on mathematics, chemistry, and computer science in the physics program, some students select an additional major or minor in one of these subjects.

Physical Chemistry I and II (CHM 424, 425, 434, and 435 may be substituted for PHY 314 Thermodynamics and PHY 315 Modern Physics. Majors must earn a grade of C- or better in all physics courses needed to satisfy major requirements.

ACADEMIC REQUIREMENTS SUMMARY SHEET

ACADEMIC YEAR 2024-2025

Major: PHYSICS

Student's Last Name First Name Middle Initial

Advisor Date Major Declared

Course Code	Title	Hours	Semester	Grade
Required Courses (31 hours)				
PHY 201	Physics I	4		
PHY 212	Physics II	4		
PHY 223	Physics III	3		
PHY 314	Thermodynamics	4		
PHY 315	Modern Physics	4		
PHY 324	Light	4		
or PHY 325	Electronics	4		
PHY 415 - 416	Introduction to Theoretical Physics I & II	8		
Other Requirements				
Mathematics through MAT 312 Differential Equations		21-24		
	MAT 090 or equivalent	2		
	MAT 111 or equivalent	3		
	MAT 121 or equivalent	3		
	MAT 124 or equivalent	5		
	MAT 214 or equivalent	4		
	MAT 224 or equivalent	3		
MAT 312	Differential Equations	3		
CHM 114/115	General Chemistry I (lecture and lab)	4		
CHM 124, 125	General Chemistry II (lecture and lab)	4		
Choose one of the following three options (6-8 hours)				
.	Completion of a two-semester sequence of courses in French or German, or certification of reading knowledge in one of the languages by the Department of Foreign Languages.	8		

Course Code	Title	Hours	Semester	Grade
.	CSC 104 and (MAT 325 Introduction to Numerical Analysis OR MAT 215 Linear Algebra)	6		
.	Six hours of computer science including CSC 111 Fundamentals of Computer Science I	6		
Total Hours For Major		66-71		

If any substitutions or waivers of requirements are allowed, please list below and initial.

Advisor Signature

Department Chair Signature