

# PHYSICS MAJOR

## Requirements for a Major in Physics

### Bachelor of Science

Code	Title	Hours
PHYS 205	Modern Physics	3
PHYS 210	Digital Electronics <sup>1</sup>	4
PHYS 250	Mathematical Physics	3
PHYS 321	Intermediate Physics Lab	1
PHYS 322	Advanced Physics Lab	1
PHYS 330	Intermediate Mechanics	4
PHYS 340	Electricity and Magnetism	4
PHYS 400 & PHYS 499	Physics Research and Senior Seminar in Physics <sup>2</sup>	6
<i>Select a minimum of six hours from the following:</i> <sup>3</sup>		6
PHYS 335	Continuum Mechanics	
PHYS 350	Computational Physics	
PHYS 381	Special Topics in Physics	
PHYS 382	Special Topics in Physics	
PHYS 430	Introductory Quantum Mechanics	
PHYS 435	Optics	
PHYS 440	Statistical and Thermal Physics	
PHYS 445	Solid State Physics	
PHYS 450	Internship in Physics	
PHYS 481	Selected Topics in Physics	
PHYS 482	Selected Topics in Physics	
ASTR 231	Astrophysics I	
ASTR 232	Astrophysics II	
ASTR 321	Observational Astronomy Laboratory	
<b>Total Hours</b>		<b>32</b>

<sup>1</sup> Substitute PHYS 215 with the permission of the department

<sup>2</sup> Substitute PHYS 496-PHYS 498 with the permission of the department

<sup>3</sup> Substitute introductory or advanced courses in other sciences up to six hours with the permission of the department

Receive a grade of C- or better in these courses.

## Teaching Certification

The program requirements of a student planning to minor in education for the purpose of certification in Physics vary slightly from those of other Physics majors. In completing the major, education students must include the following courses, as well as ENGL 185 and the Education minor (<https://catalog.rmc.edu/programs/education/education-minor-secondary/>). Not all courses required for certification will apply to the Physics major.

Code	Title	Hours
PHYS 151	Introductory Physics	4
PHYS 152	Introductory Physics	4
PHYS 205	Modern Physics	3
PHYS 210	Digital Electronics	4
PHYS 250	Mathematical Physics	3

PHYS 321	Intermediate Physics Lab	1
PHYS 322	Advanced Physics Lab	1
PHYS 330	Intermediate Mechanics	4
PHYS 340	Electricity and Magnetism	4
PHYS 400	Physics Research	3
PHYS 499	Senior Seminar in Physics	3
BIOL 123	Principles in Molecular Biology	3
CHEM 111	Chemistry for the Citizen	4
MATH 131 or MATH 132	Calculus I Calculus II	4
Select one of the following:		3-4
ASTR 101	Introductory Astronomy	
ASTR 231	Astrophysics I	
ASTR 232	Astrophysics II	
GEOL 101	Introduction to Geology and the Environment	
GEOL 102	A Geologic History of Earth	
<b>Total Hours</b>		<b>48-49</b>