

PROGRAM NAME: Physics Course Map
PROGRAM COLLEGE: College of Health and Human Services
CATALOG TERM: 2019-2020

Program Description: The Physics major emphasizes a mathematical and conceptual understanding of the physical world. As one of the basic sciences, physics serves as the cornerstone of engineering. Physics supports and complements the other basic sciences of biology and chemistry. Physics majors at Rockhurst are empowered with critical thinking, problem-solving, and communication skills that are in high demand in our modern world.

NOTE: Individual Programs of Study will vary in consultation with your Advisor and course/section availability each term. The below schedule serves only as an **example** four year degree plan. If you are a pre-medical student, be sure to consult with a pre-medicine advisor in addition to your discipline advisor.

YEAR 1

Fall Semester

Course Name	Credits	Minimum Grade Required	Experience Notes
Core: Written Communication (WCP)	3		<ul style="list-style-type: none"> Join an RU Academy Participate in the Finucane Service Project Attend the New Student Retreat
MT 1800 Calculus I (MTP)	4	C	
CH 2610 General Chemistry I	3	C	
CH 2620 General Chemistry Laboratory I	1	C	
Elective	3		
Elective	1		
TOTAL HOURS	15		

Spring Semester

Course Name	Credits	Minimum Grade Required	Notes
Core: Oral Communication (OCP)	3		<ul style="list-style-type: none"> Join Society of Physics Students
PH 2850 Physics for Scientists and Engineers I (SCI)	3	C	
PH 2860 Physics for Scientists and Engineers Laboratory I (SCI)	1	C	
CH 2630 General Chemistry II	3	C	
CH 2640 General Chemistry Laboratory II	1	C	
MT 1810 Calculus II	4	C	
TOTAL HOURS	15		

YEAR 2

Fall Semester

Course Name	Credits	Minimum Grade Required	Notes
Core: Historical Mode Level I (HSI)	3		
PH 2940 Physics for Scientists and Engineers II (SCII)	3	C	
PH 2920 Physics for Scientists and Engineers Laboratory II (SCII)	1	C	
MT 2800 Calculus III	4	C	
PH 3500 Statics	3	C	
Elective	3		
TOTAL HOURS	17		

Spring Semester

Course Name	Credits	Minimum Grade Required	Notes
Core: Literary Mode Level I (LTI)	3		Apply for Summer Research Experiences (REU)
Core: Theological Mode Level I (THI)	3		
PH 4000 Electric Circuits	3	C	
PH 4100 Dynamics	3	C	
Elective	3		
TOTAL HOURS	15		

YEAR 3

Fall Semester

Course Name	Credits	Minimum Grade Required	Notes
Core: Historical Mode or Literary Mode Level II (HSII or LTII)	3		
Core: Scientific-Relational Mode Lv I (SRI)	3		
Core: Philosophical Mode Level I (PLI)	3		
MT 2200 Mathematical Computing	3	C	
PH 3510 Physical Chemistry I	3	C	
Core: Artistic Mode (ARI)	3		
TOTAL HOURS	18		

Spring Semester

Course Name	Credits	Minimum Grade Required	Notes
Core: Philosophical Mode Level II (PLII)	3		Apply for Summer Research Experiences (REU)
Elective	3		
MT 3700 Differential Equations	3	C	
PH 3530 Physical Chemistry II	3	C	
Physics Elective	3	C	
TOTAL HOURS	15		

YEAR 4

Fall Semester

Course Name	Credits	Minimum Grade Required	Notes
Core: Theological Mode Level II (THII)	3		
PH 3710 Mathematical Methods in Physics	3	C	
PH 4500 Modern Physics	3	C	
PH 4940 Research Physics Capstone	1	C	
Elective	3		
Elective	3		
TOTAL HOURS	16		

Spring Semester

Course Name	Credits	Minimum Grade Required	Notes
Core: Philosophical Mode or Theological Mode Level II (PLII or THII)	3		
Core: Global Perspectives (GPR)	3		
Core: Scientific-Relational Mode Level I or Level II (SRI or SRII)	3		
MT 3810 Linear Algebra	3	C	
Elective	3		
Elective	3		
TOTAL HOURS	18		

Credit Hours

- Core: 51-54 hours
- Major: 62 hours
- Electives 25 hours; depending on career interests, these used to double-major in mathematics or add a major in another subject. Discuss these possibilities with your advisor.

TOTAL Credit Hours: 129