

ABOUT THE MAJOR

Physics is the science of uncovering how the universe works — through mathematics, exploration, and a deep curiosity about the world around us. It's a major for problem-solvers who thrive on asking questions and finding answers.

At Scranton, you'll explore a wide range of topics: from space and stars, to the tiniest building blocks of matter, to the forces, motion, and energy that shape the world we live in.

CONTACT US

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Challenge your mind, shape the future —
discover Physics.

OUTCOMES & OPPORTUNITIES

- Get hands-on research experience from day one — designing instruments, analyzing data, and conducting lab experiments.
- Graduates go on to pursue advanced degrees in physics, engineering, computer science, or medicine at leading graduate programs across the country.
- Others launch successful careers in fields such as astronomy, mechanical engineering, software development, and data analysis. Our graduates are employed by leading organizations, including government agencies, research laboratories, and major technology and engineering companies.



PHYSICS

128-129 Credits

LEARN
MORE!



1st Year: FALL

COURSE#	COURSE TITLE	CREDITS
PHYS 140/140L	Elements of Physics I	4
MATH 109	Pre-Calculus Mathematics or MATH 114 Calculus I	4
WRTG 107	Composition	3
PHYS 150	Foundations of Physics and Engineering	3
PHIL 120	Introduction to Philosophy	3
First Year Seminar		0

Total Credits: 17

1st Year: SPRING

COURSE#	COURSE TITLE	CREDITS
PHYS 141/141L	Elements of Physics II	4
MATH 114	Calculus I or MATH 221 Calculus II	4
HUMN ELECT	Humanities Elective	3
T/RS 121	Theology I: Introduction to the Bible	3
First Year Seminar		0

Total Credits: 14

2nd Year: FALL

COURSE#	COURSE TITLE	CREDITS
PHYS 270/270L	Elements of Modern Physics	4
EE 250/250L	Computational Tools for Physics and Engineering	4
MATH 221	Calculus II or MATH 222 Calculus III	4
S/BH ELECT	Social/Behavioral Electives	3

Total Credits: 15

2nd Year: SPRING

COURSE#	COURSE TITLE	CREDITS
PHYS 352	Statistical and Engineering Thermodynamics	3
EE 241/241L	Circuit Analysis	4
MATH 222	Calculus III or MATH 341 Differential Equations	4
S/BH ELECT	Social/Behavioral Elective	3
PHIL 210	Ethics	3

Total Credits: 17

3rd Year: FALL

COURSE#	COURSE TITLE	CREDITS
PHYS 447	Electromagnetics I	3
PHYS 371	Advanced Mechanics	3
PHYS 350	Applied and Engineering Mathematics	3
MATH 341	Differential Equations or ELECT Elective	3-4
HUMN ELECT	Humanities Elective	3

Total Credits: 15-16

3rd Year: SPRING

COURSE#	COURSE TITLE	CREDITS
PHYS 372	Quantum Mechanics	3
PHYS 333	Experimental Methods in Physics	3
PHYS 392	Foundations of Research	1
T/RS 122	Theology II: Introduction to Christian Theology	3
PHIL ELECT	Philosophy Elective or T/RS ELECT Theology Elective	3
HUMN ELECT	Humanities Elective	3

Total Credits: 16

4th Year: FALL

COURSE#	COURSE TITLE	CREDITS
PHYS 493	Research Seminar I	1
PHYS 473/473L	Optics	4
COGNATE ELECT	Cognate Elective	3
HUMN ELECT	Humanities Electives	3
FREE ELECT	Free Electives	6

Total Credits: 17

4th Year: SPRING

COURSE#	COURSE TITLE	CREDITS
PHYS 494	Research Seminar II	2
PHYS/EE ELECT	Physics/EE Electives	6
HUMN ELECT	Humanities Elective	3
FREE ELECT	Free Electives	6

Total Credits: 17

This is a sample curriculum. Please refer to the 2025-2026 Undergraduate Catalog at scranton.edu/catalog.