

Physics Program

Physics Degrees and Certificates

The Physics Minor

Associate Professor: Stuart Hutton

The physics minor is a course of study designed as a second field for students who wish to develop a deeper understanding of physics.

NOTE

* Students may use MTH 210, PHY 240 and PHY 241 to satisfy core requirements.

Program:

[Physics](#)

Summary of Requirements for a Minor in Physics

Item #	Title	Credits
MTH 210	Calculus I	4
MTH 220	Calculus II	4
	PHY 210/211 or PHY 240/241	4
	PHY 220/221 or PHY 250/251	4
PHY 335	Modern Physics	3
	Physics Electives (300-400 level)	4
	Sub-Total Credits	23
	Total credits for degree:	23

Physics Classes

EM 50: Engineering Mechanics Statics

Statics is not taught at Lyon. Arrangements should be made to complete this course at an ABET-accredited engineering school as required by the program of choice after completion of the physics sequence PHY 240, 241 and PHY 250, 251.

Credits: 3

Prerequisites: [PHY 240](#) [PHY 241](#) [PHY 250](#) [PHY 251](#)

PHY 210: General Physics I

Newtonian mechanics, sound propagation, heat transfer, and thermodynamics using algebra and trigonometry.

Credits: 3

Prerequisites: MTH 110 or permission of instructor.

PHY 211: General Physics I Laboratory

Experimental techniques for Physics I.

Credits: 1

PHY 220: General Physics II

Study of electricity, magnetism, light, and optics using algebra and trigonometry.

Credits: 3

Prerequisites: [PHY 210](#)

PHY 221: General Physics II Laboratory

Experimental techniques for Physics II.

Credits: 1

PHY 235: Introduction to Digital Logic

An introduction to digital electronic circuits and techniques. Boolean Algebra, digital logic gates, registers, automata theory, and integrated circuits. (Same as CSC 245)

Credits: 3

Prerequisites: [MTH 115](#)

PHY 240: Fundamentals of Physics I

Principles of Newtonian mechanics, sound propagation, heat transfer, and thermodynamics employing differential and integral calculus.

Credits: 3

Prerequisites: MTH 210 or permission of instructor.

PHY 241: Fundamentals of Physics I Laboratory

Experimental techniques for PHY 240.

Credits: 1

PHY 250: Fundamentals of Physics II

Study of the basic principles of electromagnetism, light propagation, and optics employing differential and integral calculus.

Credits: 3

Prerequisites: MTH 220 and either PHY 210 or PHY 240 or permission of instructor.

PHY 251: Fundamentals of Physics II Laboratory

Experimental techniques for PHY 250.

Credits: 1

PHY 282: Special Topics in Physics

Study of selected topics in physics. Prerequisites will vary.

Credits: 3

PHY 321: Independent Study

Directed study on an individual basis covering topics from advanced physics.

Credits: 1 - 3

Prerequisites: PHY 210 or 240, PHY 220 or 250, and permission of instructor. Course may be repeated for up to 3 credits.

PHY 335: Modern Physics

Relativity, elementary particles, quantum mechanics, wave and particle theories, and spectra.

Credits: 3

Prerequisites: PHY 220 or PHY 250 or permission of instructor.

PHY 382: Special Topics in Physics

Study of selected topics in physics. Prerequisites will vary.

Credits: 3

PHY 390: Seminar in Physics

Students research areas from advanced physics and deliver oral presentations supported by a formal paper.

Credits: 1

Prerequisites: MTH 220 and either PHY 220 or PHY 250 or permission of instructor. Course may be repeated for credit once.