

# PHYSICS (PHYS)

## **PHYS 1114. General Physics For Non-Science Majors. 4 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 1205. Introductory Physics I For Physics Majors. 5 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 1215. Introductory Physics II For Physics Majors. 5 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 1300. General Physics Laboratory. 2 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 1302. General Physics Laboratory. 2 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 1311. General Physics Lab I. 1 Credit Hour.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 1321. General Physics Lab II. 1 Credit Hour.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 1453. Musical Acoustics. 3 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2064. Wave/Opt/Relativity. 4 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2203. Introductory Physics III: Modern Physics. 3 Credit Hours.**

Prerequisite: 1215 or 2524 (or concurrent enrollment), or permission of instructor. An introduction to an overview of key concepts in contemporary physics, with emphasis on the contrast between classical and modern ways of thinking about the physical universe. Includes an introduction to selected major subject areas, which might include light and optics, relativity, atoms and molecules, the solid state, nuclei, elementary particles, fundamental interactions, cosmology and/or chaos. Students will also explore selected topics in current physics research.

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2302. Electronics Laboratory I. 2 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2303. Electronics. 3 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2312. Electronics Lab II. 2 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2414. General Physics For Life Science Oriented Majors. 4 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2424. General Physics For Life Science Oriented Majors. 4 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2514. General Physics For Engineering And Science Majors. 4 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2524. General Physics For Engineering And Science Majors. 4 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

## **PHYS 2613. Introduction To Medical Physics. 3 Credit Hours.**

### **Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 2970. Selected Topics in Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3043. Physical Mechanics I. 3 Credit Hours.**

Prerequisite: 1205 or 2514, and Mathematics 3113 or 3413 (or concurrent enrollment); or permission of instructor. Differential equations based continuum mechanics: Newtonian particle mechanics, driven and damped oscillations, vibrations and waves, and their application to other linear systems, non-linear oscillations, introduction to Lagrange's equations. (Sp)

**Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3053. Physical Mechanics II. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3054. Physical Mechanics. 4 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3113. Quantum Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3183. Electricity & Magnetism I. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3223. Modern Physics For Engineers. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3302. Advanced Lab I. 2 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3312. Advanced Lab II. 2 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3440. Mentored Research Experience. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3803. Introduction To Quantum Mechanics I. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3960. Honors Reading. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3970. Honors Seminar. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3980. Honors Research. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 3990. Independent Study. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4153. Statistical Physics And Thermodynamics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4183. Electricity And Magnetism II. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4213. Nuclear And Particle Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4223. Modern Optics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4243. Solid State Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4300. Senior Research Project. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4310. Senior Research Project I. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4320. Senior Research Project II. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4803. Introduction To Quantum Mechanics Ii. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4813. Atomic And Molecular Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4970. Seminar-Selected Topics In Physics. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 4990. Independent Study. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5000. Intro to Grad Studies Physics. 0 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5001. Intro to Grad Studies Physics. 1 Credit Hour.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5013. Mathematical Methods In Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5153. Classical Mechanics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5163. Statistical Mechanics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5213. Nuclear And Particle Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5223. Modern Optics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5243. Solid State Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5393. Quantum Mechanics I. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5403. Quantum Mechanics Ii. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5573. Electrodynamics I. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5583. Electrodynamics Ii. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5813. Quantum Mechanics Of Atoms. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5910. Problems In Natural Science. 1-2 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5970. Seminar - Selected Topics In Modern Physics. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5980. Research For Master's Thesis. 2-9 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 5990. Special Studies. 1-4 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6213. Advanced Particle Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6243. Advanced Solid State Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6283. Advanced Atomic/Molecular Physics. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6333. General Relativity. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6433. Quantum Field Theory. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6443. Advanced Quantum Field Theory. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6810. Seminar On Atomic And Molecular Collision Dynamics. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6821. Seminar On Chemical Physics. 1 Credit Hour.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6831. Seminar On Applied Physics. 1 Credit Hour.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6841. Seminar On Nuclear And Particle Physics. 1 Credit Hour.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6851. Seminar On Solid State Physics. 1 Credit Hour.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6860. Advanced Topics In Mathematical Methods In Physics. 1-3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6970. Special Topics/Seminar. 3 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).

**PHYS 6980. Research For Doctor's Dissertation. 2-16 Credit Hours.****Course Type:** Lecture

This course is facilitated by the University of Oklahoma Norman Campus. For more information, please visit the OU Course Catalog (<https://ou-public.courseleaf.com/courses/>).