

PHYSICS COURSE ROTATIONS

Not all upper-level physics courses are offered each year due to the small size of the department. However, courses are offered in a rotation that ensures on-time graduations and provides students access to all courses with a little planning.

FALL EVEN YEARS

1950 Physics Gateway
3504 Experimental Physics I
3600 Thermodynamics
3750 Electricity & Magnetism I
4200 Intro to Quantum Mechanics
4350 Astrophysics
4500 Biological Physics

FALL ODD YEARS

1950 Physics Gateway
3504 Experimental Physics I
3600 Thermodynamics
3750 Electricity and Magnetism I
4200 Intro to Quantum Mechanics
3500 Elements of Electronics
4550 Physics in Medicine

SPRING ODD YEARS

2130 Modern Physics
3524 Experimental Physics II
3250 Mathematical Methods
3300 Intro to Biomedical Physics
3450 Classical Mechanics
3800 Optics
3760 Electricity & Magnetism II

SPRING EVEN YEARS

2130 Modern Physics
3524 Experimental Physics II
3250 Mathematical Methods
3300 Intro to Biomedical Physics
3450 Classical Mechanics
3800 Optics
4210 Quantum Theory

Courses shown in bold rotate every other year.



Durham Science Center

6001 Dodge Street, Omaha, NE 68182

physics.unomaha.edu

unophysics@unomaha.edu

402.554.2511

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4-YEAR ROAD MAPS PHYSICS B.S.



UNIVERSITY OF
Nebraska
Omaha

PHYSICS B.S. (CALCULUS PLACEMENT)

FALL

SPRING

Year 1

PHYS 1950 Physics Gateway
MATH 1950 Calculus I

PHYS 2110 General Physics I
PHYS 1154 Physics Laboratory I
MATH 1960 Calculus II

Year 2

PHYS 2120 General Physics II
PHYS 1164 Physics Laboratory II
MATH 1970 Calculus III

PHYS 2130 Modern Physics
PHYS 3250 Mathematical Methods

Year 3

PHYS 3600 Thermodynamics
PHYS 3504 Experimental Physics I
PHYS 3750 Electricity & Mag. I

PHYS 3450 Classical Mechanics
PHYS 3525 Experimental Physics II
PHYS 3800 Optics

Year 4

PHYS 4200 Intro to Quantum
PHYS 3500/4350 Elements of Electronics or Astrophysics

PPHYS 4950 Senior Project
PHYS 3760/4210 Electricity & Magnetism II or Quantum Theory

Courses **highlighted in bold** can be swapped based on student interest.

PHYSICS B.S. (PRE-CALCULUS PLACEMENT)

Year 1

PHYS 1950 Physics Gateway
MATH 1340 Algebra and Trig

MATH 1950 Calculus I
You can also take 2110 and MATH 1960 in summer to be caught up in Year 2 for flexibility.

Year 2

PHYS 2110 General Physics I
PHYS 1154 Physics Laboratory I
MATH 1960 Calculus II

PHYS 2120 General Physics II
PHYS 1164 Physics Laboratory II
PHYS 3300 Intro to Biomed. Physics
MATH 1970 Calculus III

Year 3

PHYS 3600 Thermodynamics
PHYS 3504 Experimental Physics I
PHYS 3500/4500 Elements of Electronics or Biological Physics

PHYS 2130 Modern Physics
PHYS 3250 Mathematical Methods
PHYS 3525 Experimental Physics II

Year 4

PHYS 3750 Electricity & Mag. I
PHYS 4200 Intro to Quantum

PHYS 3450 Classical Mechanics
PHYS 3800 Optics
PHYS 4950 Senior Project

FALL

SPRING

Year 1

PHYS 1950 Physics Gateway
MATH 1950 Calculus I

PHYS 2110 General Physics I
PHYS 1154 Physics Laboratory I
MATH 1960 Calculus II

Year 2

PHYS 2120 General Physics II
PHYS 1164 Physics Laboratory II
MATH 1970 Calculus III

PHYS 2130 Modern Physics
PHYS 3250 Mathematical Methods
PHYS 3300 Intro to Biomed. Physics

It is important that PHYS 3300 be taken in the 2nd year.

Year 3

PHYS 3600 Thermodynamics
PHYS 3504 Experimental Physics I
PHYS 4500 Biological Physics

PHYS 3450 Classical Mechanics
PHYS 3525 Experimental Physics II
PHYS 3800 Optics

Year 4

PHYS 3750 Electricity & Mag. I
PHYS 4550 Physics in Medicine

PHYS 4950 Senior Project

Courses **highlighted in bold** are swapped based on when they are offered.

Year 1

PHYS 1950 Physics Gateway
PHYS 1350 Principles of Astronomy
PHYS 1354 Astronomy Lab
MATH 1950 Calculus I

PHYS 2110 General Physics I
PHYS 1154 Physics Laboratory I
MATH 1960 Calculus II

Year 2

PHYS 2120 General Physics II
PHYS 1164 Physics Laboratory II
MATH 1970 Calculus III
TED 2100 Educational Foundations

PHYS 2130 Modern Physics
PHYS 3250 Mathematical Methods
TED 2380 Development & Learning
TED 2400 Planning for Eff. Teaching

Year 3

PHYS 3600 Thermodynamics
PHYS 3504 Experimental Physics I
SPED 3800 Differentiation
GEOL 1170 Intro to Phys. Geology

PHYS 3450 Classical Mechanics
PHYS 3300 Intro to Biomed. Physics
TED 3550 Classroom Management
TED 3690 Literacy & Learning

Year 4

PHYS 3750 Electricity & Mag. I
TED 4000 Methods in Content Area
CHEM 1180 General Chemistry I
CHEM 1184 Gen. Chemistry I Lab

TED 4600 Clinical Practice
PHYS 3250 can be substituted with **MATH 2350** for flexibility.

BIOMEDICAL PHYSICS

PHYSICS EDUCATION