

PHYSICS (PHYS)

PHYS 500 INDEPENDENT STUDY OR RESEARCH1-3 Credits

Designed for the graduate student seeking an individual problem in science.

Add Consent: Instructor Consent

Notes: May be repeated.

Requirements: Permission of instructor and academic dean required.

PHYS 530 TOPICS IN PHYSICS1-3 Credits

A course on selected science topics. Course content will vary to meet the special needs of students. The course may involve classroom/field-oriented activity. Credit is dependent upon length of course and depth of study. Field trips may be required.

Notes: May be repeated with different topics.

PHYS 534 MECHANICS3 Credits

Principles of Newtonian mechanics including Lagrangian and Hamiltonian formalism.

Dual-listed: PHYS 434

PHYS 536 SCIENCE EDUCATION1-6 Credits

Designed to meet the needs of teachers desiring science content and skills not covered in another course. Topics and credit will be arranged to meet the needs of participants.

Notes: Can be repeated with a change of emphasis.

PHYS 544 THERMODYNAMICS3 Credits

Principles of statistical physics and applications to the laws of thermodynamics.

Dual-listed: PHYS 444

PHYS 554 ELECTRICITY AND MAGNETISM I3 Credits

Special methods in electromagnetic theory, static fields, introduction to Maxwell's equations, and electric fields in the presence of matter.

Dual-listed: PHYS 454

PHYS 564 QUANTUM MECHANICS I3 Credits

Current methods in quantum mechanics, wave nature of matter, symmetry laws, and development of state function.

Dual-listed: PHYS 464

PHYS 571D ELECTRICITY AND MAGNETISM II3 Credits

Dynamic fields, magnetic fields in the presence of matter, propagation of electromagnetic radiation and advanced use of Maxwell's equations.

Prerequisites: PHYS 554

Dual-listed: PHYS 471D

PHYS 571E OPTICS1 Credit

A study of optical phenomena including ray optics and wave optics.

Dual-listed: PHYS 471E

PHYS 571G QUANTUM MECHANICS II3 Credits

Time development of wave functions, perturbation theory, spin functions, the hydrogen atom and the WKB approximation.

Dual-listed: PHYS 471G

PHYS 571H ADVANCED ASTRONOMY1-3 Credits

A quantitative study of topics introduced in PHYS 333. Includes astrophotography, deep sky viewing, planetarium.

Dual-listed: PHYS 471H

PHYS 571J INDEPENDENT STUDY OR RESEARCH1-3 Credits

Study or research in an area of special interest. The number of credit hours is determined by the topic and the amount of work required.

Requirements: Permission of instructor and academic dean required.

PHYS 571K ADVANCED PHYSICS LABORATORY1-2 Credits

Experiments in optics, electronics, mechanics and modern physics.

Dual-listed: PHYS 471K

Requirements: Credit hours of one (1) or two (2) each semester, with maximum of four (4) credit hours total.

PHYS 571M TOPICS IN PHYSICS1-3 Credits

Designed to meet the needs of students in a special area of interest.

Notes: May be repeated for up to six (6) credit hours.

PHYS 600 INDEPENDENT STUDY OR RESEARCH1-3 Credits

Research investigations in physics.

Add Consent: Instructor Consent

Requirements: Permission of instructor and academic dean required.

PHYS 630 TOPICS IN PHYSICS1-3 Credits

Selected physics topics. Content varies to meet the special needs of students. May involve classroom/field-oriented activity. Credit is dependent upon length of course and depth of study. Field trips may be required.

Notes: May be repeated with different topics for up to six (6) credit hours.

PHYS 655 SCHOLARLY PROJECT3 Credits

For students selecting Plan II, as listed under Program Requirements. Scholarly project pertaining to a field of specialization. Designed in consultation with the student's graduate committee and includes an extensive paper summarizing the project.

Add Consent: Instructor Consent

PHYS 660 THESIS RESEARCH1-6 Credits

For students selecting Plan I, as listed under Program Requirements. Original investigations in physics leading to the master's thesis.

Add Consent: Instructor Consent

Requirements: Must complete six (6) credit hours; prior to registration, the proposal must be approved by the student's committee and Dean of Graduate Studies.