

840 Seminar in Value Theory
Spring. 2 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in Philosophy or approval of department.

Major figures, themes, or periods in ethics or aesthetics. Topics vary.

850 Seminar in Social and Political Philosophy
Spring of even years. 2 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in Philosophy or approval of department.

Major figures, themes, or periods in social and political philosophy. Topics vary.

860 Seminar in Metaphysics and Epistemology
Fall. 2 to 4 credits. A student may earn a maximum of 15 credits in all enrollments for this course. R: Open only to graduate students in Philosophy or approval of department.

Selected topics in metaphysics, epistemology, and philosophy of mind.

867 Nature and Practice of Cognitive Science
Spring. 3(3-0) Interdepartmental with Zoology; Psychology; Linguistics; Computer Science and Engineering. Administered by Department of Zoology. RB: Undergraduate course work in behavioral biology, cognitive psychology, philosophy, linguistics, or artificial intelligence.

Survey of how different disciplines explore the cognitive processes underlying intelligent behavior.

870 Seminar in Philosophy of Health Care
Fall. 2 to 4 credits. A student may earn a maximum of 15 credits in all enrollments for this course. R: Open only to graduate students in Philosophy or approval of department.

Ethical, political, theoretical, and methodological issues in medicine and health care.

880 Seminar in Philosophy of Science
Spring. 2 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in Philosophy or approval of department.

Selected topics in the philosophy of the special sciences, in the metatheory of science, and in the social studies of science.

890 Independent Study
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Approval of department.

Special projects, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.

894 Practicum in Philosophy of Health Care
Fall, Spring. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (PHL 344) R: Open only to graduate students in Philosophy or approval of department.

Study of ethical and policy issues in hospital and governmental agency settings.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department.

Directed research leading to a master's thesis in partial fulfillment of Plan A master's degree requirements.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 75 credits in all enrollments for this course. R: Approval of department.

Doctoral dissertation research.

PHYSICAL MEDICINE PMR AND REHABILITATION

Department of Physical Medicine and Rehabilitation College of Osteopathic Medicine

590 Special Problems
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 24 credits in all enrollments for this course.

Each student works under faculty direction on an experimental, theoretical or applied problem in physical medicine and rehabilitation.

601 Physical Medicine and Rehabilitation Clerkship
Fall, Spring, Summer. 2 to 12 credits. Fall: Michigan Capital Med. Spring: Michigan Capital Med. Summer: Michigan Capital Med. A student may earn a maximum of 12 credits in all enrollments for this course.

Physical medicine and rehabilitation inpatient and ambulatory setting clinical experience, didactic sessions, case documentation and presentation, hospital rounds. Strong emphasis on evaluation of neuromusculoskeletal disorders and treatment of function deficits.

620 Directed Studies
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open only to juniors or seniors in the College of Osteopathic Medicine. Completion of Semester 6 in the graduate-professional program.

Individual or group projects on special problems related to physical medicine and rehabilitation.

806 Advanced Neuroscience Techniques Laboratory
Spring. 3(0-9) Interdepartmental with Neuroscience; Psychology; Pharmacology and Toxicology; Radiology. Administered by Program in Neuroscience. RB: (PHM 827) R: Open only to doctoral students in the Neuroscience major.

Methods and underlying principles of neuroscience research.

PHYSICS

PHY

Department of Physics and Astronomy College of Natural Science

101 Concepts in Physics
Fall. 1(1-0)
Conceptual foundations of physics emphasizing key experiments.

102 Physics Computations I
Spring. 1(0-3) P:M: (PHY 183 or concurrently or PHY 183B or concurrently or PHY 193H or concurrently or PHY 181B or concurrently) RB: (CSE 101 or CSE 231)
Use of Mathematica to solve, analyze and graph equations and data from mechanics.

170 Investigations in Physics
Fall. 3(0-6) R: Approval of department.
Experiments in optics, electronics, sound and mechanics; analysis of data using computers, library research and oral presentations.

181B Basic Physics I
Fall, Spring, Summer. 3 credits. P:M; (MTH 132 or MTH 152H or LBS 118) Not open to students with credit in LBS 271 or PHY 183 or PHY 183B or PHY 193H or PHY 231 or PHY 231B or PHY 231C, PHY 233B.

Newton's laws of motion, conservation of momentum and angular momentum, energy conservation, thermal physics, waves, and sound. This course is given in the competency based instruction format.

182B Basic Physics II
Fall, Spring, Summer. 3 credits. P:M: (PHY 183 or PHY 183B or PHY 181B or LBS 271 or PHY 193H) or (PHY 231 or concurrently and PHY 233B) or (PHY 231B or concurrently and PHY 233B) and (MTH 133 or MTH 153H or LBS 119) Not open to students with credit in LBS 272 or PHY 184 or PHY 184B or PHY 232 or PHY 232B or PHY 294H.

Electricity and magnetism, optical phenomena, interference and diffraction of light, atomic and subatomic topics. This course is given in the competency based instruction format.

183 Physics for Scientists and Engineers I
Fall, Spring. 4(5-0) P:M: (MTH 132 or MTH 152H or LBS 118) Not open to students with credit in LBS 164 or PHY 181B or PHY 183B or PHY 193H or PHY 231 or PHY 231B.

Mechanics, Newton's laws, momentum, energy conservation laws, rotational motion, oscillation, gravity, waves.

183A Physics I
Fall, Spring, Summer. 1 credit. P:M: (PHY 181B) Not open to students with credit in LBS 271 or PHY 183 or PHY 183B or PHY 193H or PHY 231 or PHY 231B or PHY 231C.

Topics from: frames of reference, special relativity, rocket equation, forced oscillations, resonances, fluid motion, numerical solutions, moments of inertia, gyroscopic motion. This course plus PHY 181B is equal to PHY 183B. This course is given in the competency based instruction format.