487 Philosophy of Mathematics
Fall of odd years. 3(3-0) RB: (PHL 330) or three courses in mathematics. Nature of mathematical truth and knowledge. Theses of logicism, formalism, intuitionism, and conventionalism.

490 Independent Study
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of department. Supervised special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

491 Special Topics in Philosophy
Fall, Spring, Summer. 3 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. Special topics supplementing regular course offerings, proposed by faculty on a group study basis.

492 Seminar for Majors (W)
Fall, Spring. 3(3-0). A student may earn a maximum of 9 credits in all enrollments for this course. P:M: Completion of Tier I writing requirement. RB: 16 credits in Philosophy. R: Open only to juniors or seniors in the Department of Philosophy or approval of department. Advanced, variable topic seminar for undergraduate majors. Seminar presentations. Substantial paper.

499 Senior Thesis Research (W)
Fall, Spring. 3(3-0) P:M: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Philosophy. Approval of department. Individual research project supervised by a faculty member that demonstrates the student's ability to do independent research and submit or present a major paper.

500 Proseminar in Philosophy
Fall, 3(3-0). R: Open only to master's students in the Department of Philosophy or approval of department. The practice of graduate and professional work in philosophy: reading, writing, presentation, critique and revision; rigor of argument and clarity of expression; areas and methods of inquiry; cooperation and dialogue in inquiry; conferences, professional activities, and employment.

501 Teaching Philosophy
Spring, 3(3-0) R: Open only to Ph.D. students in Philosophy or approval of department. Theoretical and pedagogical issues in teaching philosophy: the nature of philosophy, designing a course and syllabus, lecturing, leading discussions, designing assignments, evaluation, classroom dynamics, using technology, teaching various areas of philosophy.

510 Seminar in the History of Philosophy
Fall. 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 thinkers, themes, periods, or movements in the history of philosophy.

520 Seminar in Continental Philosophy
Fall 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 or themes in 19th and 20th century continental philosophy.

530 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 social and political philosophy. Topics vary.

540 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.

550 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.

560 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.

570 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.

590 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.

600 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. R: (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.

820 Seminar in Continental Philosophy
Fall 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 or themes in 19th and 20th century continental philosophy.

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 social and political philosophy. 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.

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. R: (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 AND REHABILITATION
PMR

Department of Physical Medicine and Rehabilitation
College of Osteopathic Medicine

501 Osteopathic Manipulative Medicine I
Fall, 1(0-2) Interdepartmental with Osteopathic Manipulative Medicine. Administered by Department of Osteopathic Manipulative Medicine. R: Open only to students in the College of Osteopathic Medicine. Basic osteopathic palpatory skills. Building on their basic palpatory skills, students will learn skills in the osteopathic manipulative treatment areas of counterstrain and muscle energy.

502 Osteopathic Manipulative Medicine - II
Spring, 1(0-2) Interdepartmental with Osteopathic Manipulative Medicine. Administered by Department of Osteopathic Manipulative Medicine. P:M: (OMM 501) R: Open only to students in the College of Osteopathic Medicine. Students will continue to learn skills in the osteopathic manipulative treatment area of muscle energy as well as high velocity low amplitude (mobilization with impulse).

503 Osteopathic Manipulative Medicine - III
Summer, 1(0-2) Interdepartmental with Osteopathic Manipulative Medicine. Administered by Department of Osteopathic Manipulative Medicine. P:M: (OMM 502) R: Open only to students in the College of Osteopathic Medicine. Students will use their palpatory skills as they learn the principles of functional (indirect) and myofascial release osteopathic manipulative treatment.

504 Osteopathic Manipulative Medicine - IV
Fall, 1(0-2) Interdepartmental with Osteopathic Manipulative Medicine. Administered by Department of Osteopathic Manipulative Medicine. P:M: (OMM 503) R: Open only to students in the College of Osteopathic Medicine. Basic cranio-sacral osteopathic manipulative medicine. Exposure to various osteopathic approaches to the extremities.
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 Mathematics 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.

184C Physics for Scientists and Engineers II
Fall, Spring. 4(5-0) P:M: (PHY 183 or PHY 183B or PHY 193H or PHY 183A) or (PHY 181B or PHY 183B or concurrently or PHY 193H or PHY 181B or concurrently or PHY 231 or concurrently or PHY 231B or concurrently or LBS 271 or PHY 181B or concurrently) RB: (MTH 133 or MTH 153H or LBS 119) Not open to students with credit in LBS 272 or PHY 182B or PHY 184 or PHY 232 or PHY 232B or PHY 294H. Electricity and magnetism, electromagnetic waves, light and optics, interference and diffraction. This course is given in the competency based instruction format.

191 Physics Laboratory for Scientists, I
Fall. 1(0-3) P:M: (PHY 183 or concurrently or PHY 183B or concurrently or PHY 193H or concurrently or PHY 231 or concurrently or PHY 231B or concurrently or LBS 271 or PHY 181B or concurrently) Not open to students with credit in PHY 251 or LBS 271L. Error analysis, exercises in motion, forces, conservation laws and some electricity and magnetism studies.

192 Physics Laboratory for Scientists, II
Spring. 4(5-4) P:M: (PHY 191 or MSM 211 or MSM 250) and (PHY 184 or concurrently or PHY 182B or concurrently or PHY 184B or concurrently or PHY 294H or concurrently or PHY 232 or concurrently or PHY 232B or concurrently or LBS 272) or PHY 184. Not open to students with credit in PHY 252 or LBS 272L. Electric and magnetic fields, circuits, wave optics, modern physics.

193H Honors Physics I-Mechanics
Spring. 3(4-0) P:M: (MTH 133 or concurrently or MTH 153H or concurrently or LBS 119 or concurrently) Not open to students with credit in PHY 183 or PHY 183B or PHY 231 or PHY 231B or PHY 184 or PHY 184B or PHY 181B or concurrently or PHY 294H or concurrently or PHY 232 or concurrently or PHY 232B or concurrently or LBS 272 or concurrently. Not open to students with credit in PHY 252 or LBS 272L. Mechanics and waves.

201 Physics Computations II
Fall. 1(0-3) P:M: (PHY 184 or concurrently or PHY 184B or concurrently or PHY 294H or concurrently) RB: (MTH 133 and PHY 102) Computer methods to analyze and visualize physics problems. Tools used will include programming languages (Fortran) and mathematical software (Mathematica, etc.).