



FALL 2019 Honors Courses

HONORS (HON)

Hon. Sem.: Hidden History - 54694 - HON 4950-002 (3 Credits) | MW 12:55 – 2:15 pm

Most Americans believe that “it can’t happen here,” so they are stunned to learn of what is now called “The American Holocaust.” More and more, long-obscured governmental documents being resurrected show that the “Indians” did not just “vanish” but were, in period terminology, deliberately “extirpated,” “wiped out,” and “annihilated” to “make room” for Euro-American settlers. This seminar critically surveys and analyzes modern literature and primary documents on the unnerving subject of The American Holocaust.

Hon. Sem.: Visual Literacy - 52645 - HON 4950-003 (3 Credits) | W 1:30 – 4:15 pm

This course introduces students to the concept of visual literacy and strategies for observing and analyzing the visual world. Students will learn to analyze images in an art museum setting as well as apply such strategies to visual information from a wide range of disciplines.

Hon. Sem.: Inside Out - 54696 - HON 4950-004 (3 Credits) | T 5:00 – 8:00 pm

The Inside-Out Prison Exchange Program facilitates dialogue and education across profound social differences. Inside-Out courses bring traditional college students and incarcerated students together in jails and prisons for semester-long learning. These courses ignite enthusiasm for learning, help students find their voice, and challenge students to consider what good citizenship requires. The course theme will be the nature and scope of human happiness. We will explore this theme by considering relevant works of philosophy, literature and art. <http://www.insideoutcenter.org/>

Ideas and Society - HON 1010 (3 Credits) *H*

Through a process of critical examination, analytical thought, and intellectual exchange, students engage in study of ideas in society during different time periods and across different cultural contexts and intellectual disciplines. Drawing upon primary and secondary sources using multiple humanities discourses, students analyze and evaluate and respond to diverse populations and perspectives. From this synthesis, students gain ability to apply understanding of ideas in contemporary society as well as ideas in their fields of study.

Multicultural Toledo - HON 2010 (3 Credits) *M-US & S*

Multicultural Toledo is an interdisciplinary investigation into the multicultural, historical and socio-economic development of the greater Toledo area and the ways that different community groups respond to, and shape, this transformation. Topics may include: ethnicity, race, gender, gender orientation, socioeconomic class, religion, national origin, dis/ability, and age within the Toledo community. The course features multiple site visits to community organizations.

Multicultural Literatures: The North American Experience-Hon-WAC - HON 2020 (3 Credits) *M-US & W*

This reading, writing and discussion course examines selected literatures of the North American experience: for example, texts by African American, Arab American, Asian American, Hispanic or Native American authors.

Multicultural Literatures: The Non-European World-Honors-WAC - HON 2030 (3 Credits) *M-NW & W*

This reading, writing and discussion course examines selected non-European literatures.

Independent Study-Community Commitment Credit - HON 2990 (1 – 5 Credits)

Supervised independent study.

Community Engagement - HON 3010 (3 Credits)

This research intensive, interdisciplinary course is designed to provide students with experience in effective community engagement through work on a local issue or problem in a mentored, multidisciplinary team. Class will focus on developing practical skills, identifying best practices, and exploring potential solutions for complex problems. The course culminates in a grant proposal that can be adopted or adapted by our community partners. Class time consists of short instructional presentations, group work, and class discussion. **Pre-requisite course: HON 2010, 2020, or 2030.**



Independent Study - HON 4990 (1 – 5 Credits)

Supervised independent study.

ARTS AND LETTERS (AR)

First Year Orientation - AR 1000 (1 Credit)

Course will introduce new students to the university and college, provide information on requirements, regulations, campus resources and career exploration and help students develop academic skills. It is required of all new students.

ASTRONOMY (ASTR)

Astrophysics I - Hon - ASTR 4810 (3 Credits)

Spherical coordinate systems, astronomical time, celestial mechanics, the solar system and planetary physics, photometry, radiative transfer, stellar spectra and classification, binary stars and stellar masses.

BIOENGINEERING (BIOE)

Orientation-Introduction to BIOE-HON-L3/R3 - BIOE 1000 (3 Credits)

Orientation to the University of Toledo, the College of Engineering and the Department of Bioengineering. This course also provides a one-semester overview of the biomechanical and bioelectrical aspects of Bioengineering. The course is broken down into unit modules that illustrate key engineering principles and concepts. A major project based on the computational modeling of the cardiovascular system integrates the course units.

Bioengineering Design Project I-HON - BIOE 4410 (3 Credits)

This course integrates the engineering and life science backgrounds of senior bioengineering students through the presentation of design principles for problems in biomechanical, bioelectrical, biochemical and biological systems. Oral and written communication, engineering economics and business plans are reviewed.

Bioengineering Special Topics-Freshmen Design - BIOE 4980 (1 Credit)

Selected subjects in the field of bioengineering with intensive investigation of the recent literature in a few areas of special interest to the class and the professor.

BIOLOGY (BIOL)

Fundamentals of Life Science: Biomolecules, Cells, and Inheritance - BIOL 2170 (4 Credits) *N*

A general introduction to cell structure and function, energy processing in plants and animals, basic genetics, molecular biology and development.

Fundamentals of Life Science Laboratory: Biomolecules, Cells, and Inheritance - HON - BIOL 2180 (1 Credit) *N*

A series of laboratory exercises which supplement the material discussed in BIOL 2170.

Molecular Genetics - Honors - BIOL 3010 (3 Credits)

The principles of heredity at the molecular level, covering gene and chromosome structure, replication and repair, recombination, control of gene expression, control of cell division.

Molecular Genetics Lab-SA/HON - BIOL 3020 (2 Credits)

A laboratory course in experimental molecular biology involving gene cloning, analysis of cloned product and other techniques of modern molecular genetics.



Developmental Biology Honors - BIOL 3090 (3 Credits)

Lectures on molecular and cellular interactions in animal and plant embryogenesis and development.

Undergraduate Research Honors - BIOL 4910 (1 – 3 Credits)

Faculty directed research. Both oral and written reports of results required.

Extramural Studies in Biology-Hon - BIOL 4940 (1 – 4 Credits)

Prior consent of both the department and the proposed supervisor. Scientist-supervised study of research done in an extramural research institute or scientific laboratory. Written and oral reports to the department required. Maximum of 6 hours may count toward BIOL electives.

BUSINESS ADMINISTRATION (BUAD)

Introduction to Business - Hon - BUAD 1010 (3 Credits)

Introduction to the various functional areas of business, the critical role business plays in the economy, the impact of globalization and the performance of business functions.

Financial Accounting Information - Honors - BUAD 2040 (3 Credits)

This course is an introduction to financial accounting from the perspective of a financial statement user. Where appropriate, it provides a small and mid-sized company's perspective.

Principles of Marketing - Honors - BUAD 3010 (3 Credits)

The general purpose of this course is to provide a basic understanding of what marketing is about including marketing management, and the marketing environment. The course will examine issues such as marketing research, consumer behavior, segmentation, targeting, and positioning strategies, product strategy, pricing strategy, distribution strategy, promotional strategy, new product development, branding, advertising, sales promotion, and public relations.

Principles of Financial Management - Hon - BUAD 3040 (3 Credits)

This course help students develop the skills necessary to understand how financial managers make value-maximizing decisions in their organization. Content stresses fundamentals of financial analysis, short and long-term investments, time value of money, stock and bond valuation, risk and return, and corporate structure.

Senior Business Policy Forum - Hon - BUAD 4020 (3 Credits)

This course integrates functional business knowledge learned in the core and stresses their interconnectedness and interrelationships. Students will develop and implement strategies in response to changes in the external environment.

CHEMICAL ENGINEERING (CHEE)

Orientation & Computing for Chemical Engineers-CHEE-Hon-L2/B2 - CHEE 1000 (3 Credits)

An introduction to the UT campus, campus resources, the College of ENG and the Dept. of Chemical and Environmental ENG. Primary emphasis is on engineering computing, data analysis and basic chemical engineering calculations.

Chemical Engineering Thermodynamics I-HON - CHEE 2230 (3 Credits)

The principles of thermodynamics and their application to chemical engineering. Topics include states and properties of matter, the first and second law of thermodynamics and thermo-chemical effects.

Separation Processes - HON - CHEE 3030 (3 Credits)

An introduction to equilibrium-based separation processes. Topics include distillation, extraction, leaching, drying and membrane separations. Preliminary equipment design calculations.



Reactor Engineering and Design-HON - CHEE 3300 (3 Credits)

Fundamentals of chemical reaction engineering. Rate laws, kinetics and mechanisms of homogeneous and heterogeneous reactions. Analysis of reaction rate data. Design of industrial reactors.

Process Dynamics & Control-HON - CHEE 3400 (3 Credits)

An introduction to designing control systems for chemical engineering processes. Process stability and controller design and selection. Application of Laplace transforms, frequency response techniques and simulation software for open-loop and closed-loop analysis.

Senior Honors Thesis - CHEE 4960 (3 Credits)

Independent research under guidance of a faculty member, requiring an oral report and a written thesis upon completion.

Honors Research - CHEE 4980 (1 – 4 Credits)

Special topics of interest to chemical engineers - upper division.

CHEMISTRY (CHEM)

General Chemistry I-Hon-LA/RA - CHEM 1230 (4 Credits) *N*

An introduction to atomic structure, chemical bonding, kinetic-molecular theory, energy relationships and structural concepts. This sequence is for students who major in science, engineering or other fields which require chemistry as a prerequisite subject. Three hours lecture and one hour discussion per week.

General Chemistry II-Hon-L2/R2 - CHEM 1240 (4 Credits) *N*

An introduction to solutions, equilibrium, acid-base theory, energy relationships and structural concepts. This sequence is for students who major in science, engineering or other fields which require chemistry as a prerequisite subject. Three hours lecture and one hour discussion per week.

Organic Chemistry I - Honors - CHEM 2410 (3 Credits)

Study of structure and reactions of organic compounds. Three hours lecture per week.

Organic Chemistry II-Hon - CHEM 2420 (3 Credits)

Study of structure and reactions of organic compounds. Three hours lecture per week.

Organic Chemistry Lab I: Separations and Elementary Synthesis-Hon-L2/B2 - CHEM 2480 (2 Credits)

For Chemistry/Biochemistry majors. Introduction to theory and laboratory practice in modern methods of physical separation techniques, and introduction to organic synthetic methods. Special emphasis is made on spectroscopic techniques used in the organic laboratory.

Undergrad Research I-Hon - CHEM 2910 (1 – 3 Credits)

An introduction to research under the guidance of a faculty member. May be repeated. A maximum accumulated credit of 4 hours in 2910 and total of 10 hours in 2910, 3910, 4910 may be applied toward a degree. May be taken only as P/NC.

Readings in Chemistry I-Hon - CHEM 2920 (1 – 2 Credits)

Readings from the literature of chemistry. May be taken only as P/NC.

Analytical Chemistry-Hon - CHEM 3310 (2 Credits)

Theory and applications of chemical equilibria to gravimetric, volumetric and separation techniques. Emphasis on the quantitative aspects of analytical chemistry. Two hours lecture per week.



Biochemistry I-Hon - CHEM 3510 (3 Credits)

The chemistry of living systems, beginning with the structures and molecular and biological functions of proteins, nucleic acids, carbohydrates and lipids. Other topics include enzyme kinetics and mechanism, biological membranes and membrane transport, and signal transduction.

Physical Chemistry I-Hon - CHEM 3730 (3 Credits)

Fundamental theories and basic laws of chemistry with emphasis on their mathematical development. Thermodynamics, equilibrium, electrochemistry, classical chemical kinetics.

Undergrad Research II-Hon - CHEM 3910 (1 – 3 Credits)

Research under the guidance of a faculty member. May be repeated. A maximum accumulated credit of 10 hours in CHEM 2910, 3910 and 4910 may be applied toward a degree. A written report is required. May be taken only as P/NC.

Readings in Chemistry II-Hon - CHEM 3920 (1 – 2 Credits)

Readings from the literature of chemistry. May be taken only as P/NC.

Instrumental Analysis-Hon - CHEM 4300 (2 Credits)

An introduction to modern chemical instrumentation and applications to chemical analysis. Topics include electrical, magnetic, nuclear and spectroscopic instrumentation.

Undergrad Research III-Hon - CHEM 4910 (1 – 3 Credits)

Thesis level research under the guidance of a faculty member. May be repeated. A minimum of three hours and an acceptable thesis required for credit toward the B.S. major. A maximum accumulated credit of 10 hours in CHEM 2910, 3910 and 4910 may be applied toward a degree. A written report is required. May be taken only as P/NC.

Readings in Chemistry III-Hon - CHEM 4920 (1 – 2 Credits)

Readings from the literature of chemistry. May be taken only as P/NC.

COMMUNICATION (COMM)

Independent Study: Honor's Thesis - COMM 4990 (1 – 4 Credits)

A seminar in which the student pursues a problem of special interest in communication. A prospectus must be submitted prior to registration to the participating faculty member.

ECONOMICS (ECON)

Principles of Microeconomics - ECON 1200 (3 Credits)

Theories of consumer behavior; determination of input and output; prices and quantities in factor and product markets; analysis of international trade and policy; applications include labor markets and income distribution.

Honors Research - ECON 3910 (1 – 4 Credits)

Study of special topics initiated either by student or a faculty member.

Honors Reading - ECON 3920 (1 – 4 Credits)

Study of special topics initiated either by student or a faculty member.



EDUCATION (EDU)

Orientation to Education - ADOL/MIDD/SPED/ERLY-HON - EDU 1000 (1 Credit)

Academic/student development course offering an introduction to College and University community. Offers strategies for successful transition to University environment by examining UT resources, procedures, academic programs and advising.

Introduction to Education-Hon - EDU 1700 (3 Credits)

Exploration of purposes of schools in society, focusing on professionalism, standards & accountability, education for democracy, legal & organizational issues, diversity, and curriculum & instruction, as well as knowledge and dispositions required to be an effective teacher.

EDUCATIONAL TECHNOLOGY & PERFORMANCE TECHNOLOGY (ETPT)

Technology & Multimedia in Educational Environments-Hon - ETPT 2020 (3 Credits)

Emphasizes the development of computing skills with a focus on productivity tools in organizing, managing, multimedia authoring, homepage development, software evaluation and presenting lessons for professional communication in K-12.

ELECTRICAL ENGINEERING & COMPUTER SCIENCE (EECS)

EECS First Year Design-Hon-L3/B3 - EECS 1000 (3 Credits)

Orientation to the University, college and departmental facilities, procedures and methodologies available to the student for the academic journey. Introduction to engineering design to EECS freshmen with emphasis on a semester long team-based design project.

Linear Data Structures-Honors - EECS 2500 (3 Credits)

This course looks at stacks, queues, and lists as well as the order of algorithms used to access and modify these structures. In addition recursion, hashing, sorting, and set representation are examined in depth.

Signals and Systems - Honors - EECS 3210 (3 Credits)

Signal and system representation. Convolution and impulse response. Fourier series, Fourier transform and Laplace transform. Discrete-time systems and Z-transforms. Computer simulation using MATLAB.

Electronics I-Hon - EECS 3400 (4 Credits)

Large-signal and incremental characteristics of the pn diode, BJT, MOSFET and JFET. Large-signal analysis and computer simulation of devices and digital circuits. Logic gate implementation. Laboratory experiments and projects.

ENGLISH (ENGL)

English Honors Seminar - ENGL 4900 (2 Credits)

The Honors Seminar is taken in conjunction with Honors Thesis (ENGL 4960). Required of all candidates for dept. Honors.

English Honors Thesis - ENGL 4960 (1 – 4 Credits)

Research and writing of a thesis on a topic in English or linguistics required of all candidates for departmental honors.

ENVIRONMENTAL SCIENCES (EEES)

Introduction to Environmental Studies-Honors - EEES 2010 (3 Credits)

Introduction to issues currently affecting environmental quality. Fundamental scientific concepts relating to those issues and ethical, economic, legal and political considerations that affect the resolution of environmental problems.



Biodiversity-Hon - EEES 2150 (4 Credits) *N*

Exploration of biodiversity and general biological processes and problems as they are experienced by all living organisms: genetics, reproduction, evolution, and ecology.

General Ecology-Hon - EEES 3050 (3 Credits)

The structure, function and regulation of populations, communities and ecosystems, emphasizing human activities and their ecological consequences.

***EXERCISE SCIENCE* (EXSC)**

Human Anatomy - HONORS - EXSC 2510 (3 Credits)

An integrated study of both regional anatomy and musculoskeletal, cardiovascular, lymphatic, respiratory, neurologic, digestive, renal, endocrine and reproductive systems. Required for students in exercise science and allied health professional programs.

Applied Exercise Physiology - HONORS - EXSC 3520 (3 Credits)

This course will provide information related to the physiological responses of the human organism to exercise and exercise training. Emphasis will also be placed on the role exercise plays in health and disease prevention.

***FILM* (FILM)**

Introduction to Film - HON - FILM 1310 (3 Credits) *H*

Introduction to the history and interpretation of cinema as art form, with emphasis on discovering how meaning is encoded in film at the levels of shot, sequence and narrative construction. (Not recommended or required for majors.)

Digital Cinema Production I- WAC (HON) - FILM 2320 (3 Credits) *W*

An intensive seminar course where digital media is explored as a means for creative expression. Students purchase supplies. For majors and minors only, or by permission of instructor. Prerequisites: Comp I and Grade of C or better in FILM 2340. May not take simultaneously with FILM 2310. Writing Intensive (WAC) course.

Critical Approaches-Cinema-Hon - FILM 2340 (3 Credits)

A critical approach to the development of cinema as an industrial, artistic and ideological practice. Emphasis on theories of film construction and interpretation and the development of analytical skills for cinema studies. Screenings included in class.

Critical Approaches to Cinema II - FILM 3330 (3 Credits)

Intermediate critical analysis of film, concentrating on a specific style, genre, national cinema of the West, or filmmaker. Emphasis on theories of film construction and interpretation. Screenings included in class. Topics vary, may be repeated to 9 hours.

Lighting and Cinematography - FILM 3510 (3 Credits)

A production/seminar course concentrating on camera format fundamentals, exposure latitude, and lenses. The science, philosophy and workflows of cinematography are explored through demonstrations, active in-class engagement, and individual production done outside of class. Majors and minors only. Interested non-majors should seek instructor permission to enroll.

Honors Thesis - FILM 4950 (3 Credits)

Research or a creative project on a topic in Film or Video. Required of all BA candidates seeking department honors. (Repeatable for 6 credit hours.)



GEOGRAPHY AND PLANNING (GEPL)

Honors Thesis in Geography - GEPL 4960 (4 Credits)

GLOBAL STUDIES (GLST)

Honors Thesis In Global Studies - GLST 4960 (3 Credits)

Supervised research and writing for Honors students only. May be taken twice for credit.

HEALTH EDUCATION (HEAL)

Nutritional Science-HON - HEAL 4700 (3 Credits)

Introduces basic human nutritional needs. Examines the role of diet and health and disease throughout the lifestyle, including weight control and fitness issues. Personal nutritional practices are analyzed and evaluated.

HISTORY (HIST)

Senior Honors Research I - HIST 4870 (3 Credits)

Open to College Honors students, to History Honors students and to Honors students from other departments. Independent research in specific topics.

MATHEMATICS (MATH)

Calculus I - Honors - MATH 1850 (4 Credits) *M*

Limits, differentiation, Fundamental Theorem of Calculus, curve sketching, maxima/minima, definite and indefinite integrals, applications. Course is not applicable toward the undergraduate Mathematics major requirements.

MECHANICAL, INDUSTRIAL, AND MANUFACTURING ENGINEERING (MIME)

Engineering Economics-Hon - MIME 2600 (3 Credits)

The study of micro-economic and macro-economic theories. Methods of economic analysis, including the time value of money, are described. Economic decision criteria are used to select best alternatives with emphasis in engineering. Impact of economic decisions on various sectors of society are discussed.

Thermodynamics I-Hon - MIME 3400 (3 Credits)

Introduction to thermal sciences with an emphasis on the first and second law of thermodynamics. Topics include conservation of energy for closed and open systems, thermodynamic properties and cycles and entropy production.

Senior Design Projects-Hon - MIME 4200 (3 Credits)

Students work in teams using knowledge gained in earlier courses to solve real design, manufacturing and operational problems relevant to industry. Oral and written communications with participating companies as well as teamwork are stressed. Other topics include patents, product liability, safety, ethics and design for manufacturing.

MEDICINAL-BIOLOGICAL CHEMISTRY (MBC)

Medicinal Chemistry I: Drug Action & Design Hon - MBC 3310 (2 Credits)

An introductory course presenting the basic chemical principles governing the behavior of drugs and the design of new therapeutics.



Physiological Chemistry I: Structure & Function Of Biological Macromolecules Hon - MBC 3550 (3 Credits)

An examination of the levels of structure of proteins, nucleic acids, other biomolecules and biomolecular assemblies.

Honors Seminar In Medicinal And Biological Chemistry - MBC 4900 (1 – 3 Credits)

An examination of a specific question in the context of the primary literature in medicinal or biological chemistry.

Honors Thesis In Medicinal And Biological Chemistry - MBC 4960 (2 – 5 Credits)

An examination of a specific research question in medicinal or biological chemistry that can be answered through experimental work.

MUSIC (MUS)

Music Theory & Ear Training I- HON - MUS 1610 (4 Credits)

Dictation, ear training and sight singing skills in rhythm, melody and harmony. Basic theoretical skills include key signatures, clefs, notation of scales, chords and rhythm patterns. Includes computer technology.

NATURAL SCIENCES & MATHEMATICS (NSM)

Natural Sciences & Mathematics- HON - NSM 1000 (2 Credits)

Course will introduce new students to the University and college, provide information on requirements, regulations, campus resources and career exploration, and help students achieve their academic goals.

NURSING (NURS)

Nursing Research 1 - Honors - NURS 3190 (2 Credits)

Focus on introduction of concepts, issues, and processes in nursing research.

Advanced Fundamentals Honors - NURS 3280 (3 Credits)

Focus on application of assessment skills and demonstrating safe procedures for high risk interventions in simulated experiences. Emphasis on the concepts of clinical judgment, professional behaviors, and collaboration.

Nursing Research 2 - Honors - NURS 3290 (1 Credit)

Introduction to evidence based practice. Emphasis is on learning how to evaluate research for evidence based practice in nursing as a baccalaureate nurse.

Nursing Care of Persons with Health Challenges HON - NURS 3300 (4 Credits)

Focus on holistic care of adults and older adults in acute care settings experiencing health problems. Emphasis on the concepts of leadership, collaboration, and communication. Recognizes individuals in context of family and community.

Nursing Care of Persons in Crisis 2 - NURS 4240 (8 Credits)

Focus on changes in health in acute care settings across the lifespan. Emphasis on concepts related to oxygenation and hemostasis; homeostasis and regulation; protection and movement, and coping and stress tolerance.

Population Health - Honors - NURS 4510 (4 Credits)

Focuses on the design and implementation of nursing care for aggregates and communities across the lifespan. Emphasis on professional nursing and health care concepts.

Professional Nursing Competency HON - NURS 4760 (3 Credits)

Focus on preparation for the National Council Licensure Examination for Registered Nurses (NCLEX – RN). All concepts in the curriculum are included in comprehensive review.



Independent Study Honors - NURS 4990 (1 – 3 Credits)

Independent study in nursing.

***PHARMACOLOGY* (PHCL)**

Introductory Physiology - PHCL 2610 (3 Credits)

This class is designed to give students a thorough introduction to human physiology and prepare them for success in the Pharmacy/Pharmaceutical Science curriculum.

Honors Seminar In Pharmacology - PHCL 4900 (1 – 3 Credits)

To examine a specific question in the context of the primary literature in pharmacology and present that in a seminar.

Honors Thesis In Pharmacology - PHCL 4960 (2 – 5 Credits)

An examination of a specific question in pharmacology which can be answered through application of experimental work, and a presentation in a thesis format.

***PHARMACY PRACTICE* (PHPR)**

Honors Seminar In Pharmacy Practice - PHPR 4900 (1 – 3 Credits)

An examination of a specific question in the context of the primary literature in pharmacy practice for advanced students.

Honors Thesis In Pharmacy Practice - PHPR 4960 (2 – 5 Credits)

An examination of a specific research question in pharmacy practice which can be answered through application of experimental work.

***PHILOSOPHY* (PHIL)**

Independent Study Honors: Symbolic Logic for Honors - PHIL 4990 (3 Credits)

***PHYSICS* (PHYS)**

Physics for Science and Engineering Majors II-Hon - PHYS 2140 (5 Credits) *N*

Calculus based general physics. Electricity and magnetism, capacitors and inductors, electromagnetic oscillations, Maxwell's equations and electromagnetic radiation, optics, images, interference, and diffraction. Five hours lecture and discussion, two hours laboratory per week.

Modern Physics I-Hon - PHYS 3310 (3 Credits) *W*

Quantum mechanics: atomic and molecular structure and spectra.

Optics and Lasers-HON - PHYS 3610 (3 Credits)

Electromagnetic theory, ray and wave optics including matrix methods, polarization, interference, diffraction, basic laser physics and survey of current laser systems.

Theoretical Mechanics-Hon - PHYS 4210 (3 Credits)

Statics & dynamics of particles, work, energy, Lagrange equations of motion, small oscillations, dynamics of rigid bodies.

Electricity and Magnetism I-Hon - PHYS 4230 (3 Credits)

Mathematical formulation of electrostatic and magnetostatic fields, potential theory solution of boundary value problems, method of images, dielectric and magnetic materials.

H = Core Humanities *N* = Core Natural Science *M* = Core Mathematics *W* = Writing Across the Curriculum

M-US = Multicultural US Diversity *M-NW* = Multicultural Non-Western *S* = Core Social Science 10



Research Problems-Physics and Astronomy-Hon - PHYS 4910 (1 – 3 Credits)

Individual experimental or theoretical projects selected with the approval of the department.

POLITICAL SCIENCE (PSC)

Independent Study For Honors Students - PSC 3990 (3 Credits)

Individual reading and research in selected topics for honors students.

Senior Honors Thesis - PSC 4960 (3 Credits)

Supervised research and writing for honors students only.

PSYCHOLOGY (PSY)

Honors Proposal - PSY 3800 (1 – 3 Credits)

Literature review and design of an experiment that will form the basis for an Honors Thesis; a formal written proposal will be prepared in conjunction with, and approved by, the thesis advisor and must be submitted to the dept. honors advisor.

Honors Research - PSY 3910 (1 – 3 Credits)

Data collection for research to form the basis for the Honors Thesis. Admission to Psych. Honors and consent of instructor.

Hon Thesis-WAC - PSY 4960 (2 – 3 Credits)

Analysis, interpretation and reporting of research aimed at understanding some aspect of behavior or its underlying mechanisms. The reports include a formal written thesis, a scientific poster and an oral presentation.

Independent Study - PSY 4990 (1 – 4 Credits)

This course is a tutorial consisting of directed independent reading, conferences with the instructor to discuss the readings and assess the student's understanding of their significance, and a paper in which the student summarizes the read material, integrates the material and discusses its significance for understanding some aspect of behavior.

RECREATION & RECREATIONAL THERAPY (RCRT)

Independent Study in Recreation and Leisure Studies-Hon - RCRT 4990 (1 – 3 Credits)

This course provides students the opportunity to develop an independent learning experience in support of academic and/or professional interests. Minimum "C" required for RCRT majors.

THEATRE (THR)

Intro to Theatre-Honors - THR 1100 (3 Credits)

Introductory survey of the development of theatre and drama from the ancient world to the present day; discussion of representative plays; slides and films complement lectures. (Not recommended or required for majors.)

THEORY AND SOCIAL FOUNDATIONS (TSOC)

Schooling And Democratic Society - TSOC 3000 (3 Credits)

The evolving role of education in the US, including the historical and contemporary relationship of schooling to other educational institutions, groups of people and the process of social change.