## Contents

## The College of Arts and Sciences <br> 2011-2012 Undergraduate Course Descriptions

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## Africana Studies Courses

AFAS 101 - Introduction to Africana Studies
Provides an overview of the experience, culture, and political practices of African descendants in the Americas and the Caribbean. The course uses a multidisciplinary approach to introduce students to the history, art, music, and literature of the African Diaspora.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

AFAS 201 - Cross Currents in Africana Studies
With a temporal focus on the 20th century, this course critically
explores and analyzes the cultural, political and intellectual practices of blacks in North, Central, and South America as well as in the Caribbean. Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

AFAS 250 - African American Herstories
Students gain insights into three distinct historical periods of African American (American) History and a cross section of African American life through the reading, analysis, and discussion of selected African
American women's autobiographies.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

AFAS 260 - Race, Politics and Religion
An examination of race and religion as in liberal tradition. How has
liberal theory purported the state will confront issues of race and religion? Have the political realities of race and religion in the modern state lived up to the promises laid out by liberalism?
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

AFAS 295 - Special Topics in Africana Studies
Provides student with the opportunity to explore specific topics in Africana Studies. Courses focus on such issues as Caribbean literature, Latin American History and Political, Black Women's History in the U.S. the Harlem Renaissance, and Blacks in Science. Uses lectures, films, and discussions. May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

AFAS 298 - Independent Study for Minors
Independent study allows students to work one on one with professors in a specific area of Africana Studies. It is designed for minors but nonminors may ask for special permission from the director. Students' past topics have included comparative women's history, race and science, and entrepreneurship of color. May be repeated twice for credit.
Credits: . 50 to 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 2 time(s) for 6.00 credit(s)

## AFAS 301 - Politics of Hip Hop

This class in an interdisciplinary, socio-historical introduction to rap music and hip hop culture. Several themes will be explored including the origins of rap music as well as the role of urban youth and their notions of race and gender. Record industry practices will also be investigated together with the impact of commercialism on hip hop. We will also consider sexism, misogyny, and violence in both the music and culture.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

AFAS 310 - Women, Crime, \& History
This class will examine gender, race and crime in US history. Specifically, we will explore the experience of female criminals from the colonial period to the present. We will conduct primary research into this subject at the Philadelphia City Archive (PCA), located at 3101 Market Street. Students will be responsible for a final research paper based on their research findings.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:

May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

AFAS 385 - Rum, Rice and Revolution: Caribbean History Course provides a broad, interdisciplinary and socio-historical introduction to the Caribbean. Several themes are covered including empire and the making of the Caribbean; slavery and emancipation; labor formation and race; revolution and resistance; gender oppression and women's experiences; and cultural expressions.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

AFAS 395-Special Topics in Africana Studies
Provides students with the opportunity to explore specific topics in
Africana Studies - but is an upper division course. Courses focus on such issues as Caribbean literature, Latin American History and Politics, Black Women's History in the US, the Harlem Renaissance, and Blacks in Science. Uses lectures, films, and discussion. May be repeated up to three times for credit if topics vary.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

AFAS 401 - Urban Social Justice Practicum I
The Urban Social Justice Practicum offers Drexel students an exciting opportunity to work on-site at a variety of community based organizations that address issues relevant to the African Diaspora.
Students can work as mentors, teaching assistants, and interns and inner-city schools, governmental agencies, judicial offices and health care facilities. Working 5 hours per week at a site of their choosing, students also participate in weekly seminars, maintain journals, and complete a final paper. Course runs over two quarters.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

AFAS 402 - Urban Social Justice Practicum II
The Urban Social Justice Practicum offers Drexel students an exciting opportunity to work on-site at a variety of community based organizations that address issues relevant to the African Diaspora. Students can work as mentors, teaching assistants, and interns and
inner-city schools, governmental agencies, judicial offices and health care facilities. Working 5 hours per week at a site of their choosing, students also participate in weekly seminars, maintain journals, and complete a final paper. Course runs over two quarters.
Credits: 3.00
College: Arts and Sciences
Department: Afro-American Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: AFAS 401 Minimum Grade: CR
Repeat Status: Not repeatable for credit

## Anthropology Courses

ANTH 101 - Introduction to Cultural Diversity
Examines the diversity that exists in human culture. Uses lectures, films, and discussions to examine and illustrate the relationship between humans and their social/cultural systems.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ANTH 110 - Human Past: Anthropology and Prehistoric Archeology Examines human origins from the australopithecines to the present, including both the physiological and archaeological records. Discusses new finds and new interpretations of evolution.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ANTH 120-Biblical Archaeology Israel/Jordon
Examines the archaeology of Israel and Jordan from the earliest human occupation until the Persian Conquest in 535 B.C. Discusses many places described in the Old Testament in an archaeological context. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

Examines anthropological and archaeological evidence of the
worldviews of non-literate people, as shown in the practice of ceremony, magic, sorcery, and witchcraft, and the role of shamans and priests.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ANTH 212 - Topics in World Ethnography
Examines the peoples and cultures of the selected cultural areas.
Emphasizes indigenous cultures and the effects of modernization on these cultures.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

ANTH 215 - Anthropology of Gender
This course takes an ethnographic approach to the study of gender socializations and gender roles. We will address issues of sex roles, the cultural construction of gender categories, the forms of gender inequality, and the ways cultures engage in gender based power relationships. While these issues will be dealt with in specific and local ethnographic contexts, students will be encouraged to make comparisons across the contexts and to compare these works with their own experience.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ANTH 220 - Aging In Cross-Cultural Perspective
Examines the status, roles, and treatments of elderly people in various societies throughout the world and among minority groups in the United States.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

May not have the following Classification(s):
Repeat Status: Not repeatable for credit

ANTH 240 - Urban Anthropology
This course will give students the opportunity to familiarize themselves with the major themes in urban anthropology and how they relate to other areas of research in anthropology and the social sciences in general. Students will focus on the research methods used by urban anthropologists as well as read different ethnographic cases of urban life.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

ANTH 250-Anthropology of Immigration
By examination of key ethnographical texts, the course covers basic theoretical and topical approaches to the anthropology of immigration, including: immigration and emigration; transnationalism and globalization; reception contexts; ethnic economies, enclaves and ethnic businesses; global economic strategies for migrant households; refugees, the state and immigration; culture, identity, and adaptation and assimilation.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ANTH 255 - Psychological Anthropology
The course is an overview of the field of Psychological Anthropology. It examines issues live nature vs. nurture; personality and "madness"; ethnopsychologies; and cognition. The attempt is to always recognize the salience and significance of culture when considering these issues. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ANTH 310 - Society In Transition: Modern and Third World Looks at the impact of 20th-century technology on traditional societies. Uses area studies from Africa, Asia, and elsewhere to explore institutions such as the family, the polity, the economy, and religion. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):

Repeat Status: Not repeatable for credit

ANTH 312 - Approaches to Intercultural Behavior
Examines theory and case studies related to working and living outside
the United States. Includes topics such as culture shock, cultural
relativity, and ethnocentrism. Selects specific geographic culture areas for case studies.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

ANTH 330 - Media Anthropology
This course will introduce students to the anthropological study of media including traditional forms of mass media as well as new media such as the Internet. Students will be exposed to the theories and methodologies of media study from an anthropological perspective.
Students will also engage in their own ethnographic studies of media to gain first hand experience with the methods of anthropology.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

ANTH 350 - Anthropology of Language
Explores how humans organize cultural activities though language and vice versa. After covering a short history of linguistic anthropological study and method, materials include ethnographic study of language and socialization, verbal art and linguistic performance, language and cultural categories, writing and literacy, and language ideologies.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

## ANTH 355 - Anthropology of Cyberspace

This course will focus on how the internet and new media have changed the way we think about space and time, the ways we works and engage in leisure activities. We will bring the approach of anthropology to the study of these new media in order to ask key questions about social life.
Credits: 3.00

College: Arts and Sciences
Department: Culture and Communication Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

ANTH 360 - Culture and the Environment
This course explores the interplay between culture and the environment by examining both ethnographic accounts from around the world and archeological materials from the last 14,000 years. Special attention is paid to the changing cultural view of the environment over the last two centuries.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
Repeat Status: Not repeatable for credit

ANTH 363 - Sacred Traditions of the East
This course introduces the student to sacred traditions of Asia: Hinduism, Buddhism and Confucianism. It will attempt a historicalcomparative investigation of these traditions. It will emphasize the practice and philosophical underpinnings of these traditions, as well as the interplay between integration of the folk or popular aspects and the abstracts or esoteric.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ANTH 365 - Family and Kinship
The course investigates the concepts of family and kinship from an anthropological perspective. It looks at the family as a critical and contradictory location at the intersection of global and transnational forces. Using anthropological concepts such as status and role, it will explore changing gender relationships, sexual expression, parenting and aging.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

The course introduces students to ethnographic research methods through eight hands-on assignments: 1) selecting a site; 2) establishing rapport; 3) operationalizing hypotheses; 4) using qualitative and quantitative data gathering techniques; 5) taking field notes ; 6) analyzing data collected; 7) synthesizing these data; and 8) writing an ethnographic report.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ANTH 380 - Special Topics in Anthropology
This course will explore current issues and debates in Anthropology. It will be conducted as a seminar. The topic will vary each term.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ANTH 499 - Directed Studies in Anthropology
Provides supervised study of special subjects in anthropology. See
department for topics and terms offered.
Credits: 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Course can be repeated 98 time(s)

## Arabic Courses

ARBC 101 - Arabic I
Introductory Arabic includes listening, speaking, reading and writing. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ARBC 102 - Arabic II
Continues ARBC 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ARBC 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 103-Arabic III
Continues ARBC 102. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ARBC 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 201 - Arabic IV
Introductory Arabic class. Includes listening, speaking, reading and writing, with individual audio lingual practice.
Credits: 4.00

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 202-Arabic V
Continues ARBC 201. Introductory Arabic class. Includes listening, speaking, reading and writing, with individual audio lingual practice.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 203-Arabic VI
Continues ARBC 202. Introductory Arabic class. Includes listening, speaking, reading and writing, with individual audio lingual practice. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 301 - Arabic VII
Advanced Arabic. Includes reading, writing, and extensive
conversational practice.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 302 - Arabic VIII
Continues ARBC 301. Provides advanced practice in translation, comprehension, and written and oral conversation.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 303 - Arabic IX
Continues ARBC 302. Provides advanced practice in translation, comprehension, and written and oral conversation.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 302 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 399-Arabic Advanced Independent Study
Provides supervised study of special topics in Arabic language and
literature. Scheduled as needed. May be repeated for credit.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 303 Minimum Grade: D
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

ARBC 411 - Arabic - Introduction to Arabic Stylistics
Fourth year of Arabic -- provides advanced practice in translation, comprehension, and written and oral communication.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 303 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 471 - Arabic Civilization
ARBC 471 presents an integrated approach in Arabic to the civilization, culture, history, and literature specific to the areas in which the language is spoken, with emphasis on the development and evaluation of cultural values.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ARBC 303 Minimum Grade: D
Repeat Status: Not repeatable for credit

ARBC 480 - Arabic Minor Thesis Course
Independent research study on a topic selected by the student. Independent study is supervised by a faculty member and guided by a plan of study. At the end of the course, the student is required to produce a paper and oral defense on the topic of his paper.

Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

Arts \& Sciences-Interdisp Stud Courses

AS-I 103 - AIDS 101
Offers a multidisciplinary approach to studying the aids epidemic.
Includes service-learning as a means of understanding and affecting the epidemic.
Credits: 3.00
College: Arts and Sciences
Department: COAS Admin (Humanities) Hist
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

AS-I 180 - Interdisciplinary Study in the Arts \& Sciences
Designed for courses that offer a multidisciplinary approach to the
study of issues and topics in the Arts and Sciences.
Credits: 1.00 to 3.00
College: Arts and Sciences
Department: Office of the Dean, Arts \& Sci
Restrictions:
Must be enrolled in one of the following Program Level(s):
Graduate Quarter
Undergraduate Quarter
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

AS-I 265 - Special Interdisciplinary Study in Arts \& Sciences
Credits: . 50 to 6.00
College: Arts and Sciences
Department: COAS Admin (Humanities) Hist
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

## Bioscience \& Biotechnology Courses

BIO 100 - Applied Cells, Genetics \& Physiology
This course is designed to provide a topical and interactive introduction
to biology for non-majors. Students will learn how trillions of tiny cells
of our bodies work together in organ systems to use food for energy, to
keep us alive, moving and healthy, and how information passes to
subsequent generations. This course is identical to BIO 107
Credits: 3.00
College: Arts and Sciences
Department: Biology

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s)
Biological Sciences
Co-Requisites: EXAM 080
Repeat Status: Not repeatable for credit

BIO 101 - Applied Biological Diversity, Ecology \& Evolution An interactive course for the non-major that discusses the variety of living things and how we ended up with them and what makes them unique. This course also explores how living things affect each other and the world as well as the impacts that humans have on the living world. This course is identical to BIO 109
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Biological Sciences
Co-Requisites: EXAM 080
Repeat Status: Not repeatable for credit

BIO 107-Cells, Genetics \& Physiology
This course is designed to provide a topical and interactive introduction to biology for non-majors. Students will learn how trillions of tiny cells of our bodies work together in organ systems to use food for energy, to keep us alive, moving and healthy, and how information passes to subsequent generations. This course is identical to BIO 100.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Biological Sciences
Co-Requisites: BIO 108, EXAM 080
Repeat Status: Not repeatable for credit

BIO 108 - Cells, Genetics \& Physiology Lab
This course is designed to be a companion course to the BIO 107
lecture. Labs are focused on providing students with a hands-on approach to science. Topics include how cells generate energy from food, how certain characteristics are genetically encoded and the physiology of human systems and diseases.
Credits: 1.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Biological Sciences
Co-Requisites: BIO 107
Repeat Status: Not repeatable for credit

BIO 109 - Biological Diversity, Ecology \& Evolution
An interactive course for the non-major that discusses the variety of living things and how we ended up with them and what makes them unique. This course also explores how living things affect each other and the world as well as the impacts that humans have on the living world. This course is identical to BIO 101
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Biological Sciences
Co-Requisites: BIO 110, EXAM 080
Repeat Status: Not repeatable for credit

BIO 110 - Biological Diversity, Ecology \& Evolution Lab
A companion course to BIO 109 that provides a hands on exploration of the diversity of life including microbes, plants and animals as well as the processes that give rise to this diversity. The labs also provide practical exploration of the impacts of human beings on the planet. Credits: 1.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Biological Sciences
Co-Requisites: BIO 109
Repeat Status: Not repeatable for credit

BIO 118 - Basics of Cancer
This course provides an opportunity for students with little or no
biology background to learn about cancer. Students can expect to learn what cancer is from a biological perspective, and how it is caused and treated. Students will also gain a basic understanding of how tumors form, and metastasize.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Biological Sciences
Repeat Status: Not repeatable for credit

## BIO 122 - Cells and Genetics

An introduction to the concepts of cell and function, cell and reproduction, cell communication, genetic inheritance, and population genetics. The relevance of genetics to society and ethical issues are included.
Credits: 4.50
College: Arts and Sciences
Department: Biology

Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 080
Pre-Requisites:
Repeat Status: Not repeatable for credit

BIO 124 - Evolution \& Organismal Diversity
Students will learn about the theory of evolution and the mechanisms of how organisms change. Using this knowledge, students will explore the diversity of organisms on Earth that is a hallmark of biology and the result of evolution by examining the representative members from the five major kingdoms of life.
Credits: 4.50
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 080
Repeat Status: Not repeatable for credit

BIO 126 - Physiology and Ecology
The first half of the course will survey physiological systems, including the respiratory, circulatory, homeostatic, excretory, and digestive systems in animals. The second half of the course will emphasize the relationships between organisms and the environment, including how humans impact ecosystems and the biosphere.
Credits: 4.50
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 080
Repeat Status: Not repeatable for credit

BIO 141 - Essential Biology
Introduces essential biological concepts to engineering students.
Content covers five core topics: cells, genetics, evolution, ecology and physiology with application to societal concerns about biotechnology, health, conservation biodiversity and bioethics. Evolution will be woven throughout the course as a unifying theme in understanding all aspects of biology.
Credits: 4.50
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
Must be enrolled in one of the following College(s)/School(s):
College of Engineering
Sch.of Biomed Engr,Sci \& HIth
May not be enrolled in one of the following Major(s):
Computer Science
Co-Requisites: EXAM 080
Pre-Requisites: CHEM 102 Minimum Grade: D

Repeat Status: Not repeatable for credit

BIO 153 - Anatomy and Physiology I
Introduction to the basics of human anatomy and physiology with an emphasis on topics of special interest to those in clinical curricula. Topics covered include organization of the body, chemical basis for life, cellular physiology, tissue types, skin as an organ system, skeletal and muscular systems.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
Pre-Requisites: (BIO 121 Minimum Grade: D or BIO 115 Minimum
Grade: D ) and CHEM 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 154 - Anatomy and Physiology II
Introduction to the basics of human anatomy and physiology with an emphasis on topics of special interest to those in clinical curricula.
Systems covered included blood/lymph, Immune, stress, GI tract,
respiratory and cardiovascular systems.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 153 Minimum Grade: D
Repeat Status: Not repeatable for credit

Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

BIO 162-General Biology II
Continues BIO 161. Covers the mechanics of heredity, including growth, differentiation, and development. Winter.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 161 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 163-General Biology III
Continues BIO 162. Covers the plant and animal kingdoms,
radiobiology, evolution, and ecology. Spring.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 162 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 164-General Biology Lab I
In this course students will perform computer simulations of laboratory exercises related to photosynthesis, enzyme activity and kinetics, the cardiovascular, muscle and bone systems, regulation of human organ systems as well as plant growth and development.
Credits: 1.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: BIO 161
Repeat Status: Not repeatable for credit

BIO 161-General Biology I
Covers structure and function of the cell and the organ-system plan of organization of the human body. Fall.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):

BIO 165-General Biology Lab II
In this course students will perform computer simulations of laboratory exercises related to cell division, mendelian genetics, DNA replication, translation and mutations. They will work with simulated microscopes to observe viral and microbial specimens. Additionally, students will learn and simulate biotechnology techniques such as DNA fingerprinting.
Credits: 1.00

College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: BIO 162
Pre-Requisites: BIO 161 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 166 - General Biology Lab III
Involves experiments demonstrating the key principles in ecology and evolution including: population parameters, food webs, species interactions, succession, eutriphication, natural selection, sexual selection and evolutionary trees.
Credits: 1.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program(s):
BS G Online
BS in Nursing On Line for US
BS in Nursing-Online
BS-A\&S Humanities ONL
BS-COEPS Online
BS-Education ONL
BSBA Online
Bachelor of Science AS ONL
Bachelor of Science CNH UG ONL
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: BIO 163
Pre-Requisites: BIO 162 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 201 - Human Physiology I
Intensive survey of the basic physiological mechanisms of cellular and human electrophysiology and the physiology of the muscular, cardiovascular, respiratory, renal, and gastrointestinal systems.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: BIO 141 Minimum Grade: D or BIO 122 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 202 - Human Physiology Laboratory
Laboratory course in human physiology. Designed to accompany BIO
201 and 203 Human Physiology I and II. Uses simulation, experimenters
and data acquisition techniques to provide practical experience in the design and execution of physiological experiments and analysis of physiological data. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.00

College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
Pre-Requisites: BIO 201 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

BIO 203 - Human Physiology II
Intensive survey of the control mechanisms of cellular and human physiology including introductions to control theory, neurophysiology, endocrine control, and control mechanisms in locomotion, cardiovascular, respiratory, renal, acid/base, gastrointestinal, and reproductive physiology.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: BIO 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

## BIO 212 - Biotechnology

Covers the use of recombinant DNA techniques in biotechnology.
Explores the many uses of biotechnology in the biological, agricultural and medical field. Also covers the social, ethical and environmental issues involved in this discipline.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
Pre-Requisites: BIO 100 Minimum Grade: D or BIO 101 Minimum Grade: D or BIO 107 Minimum Grade: D or BIO 109 Minimum Grade: D or BIO 122 Minimum Grade: D or BIO 141 Minimum Grade: D Repeat Status: Not repeatable for credit

## BIO 214 - Principles of Cell Biology

The course familiarizes students with the basic fundamentals and principles of cell biology. Topics include protein and enzymes as metabolic facilitators, the source and function of cellular energy, cell structure and function, cellular protein transport, cell communication, cell cycle control, apoptosis, and cell differentiation.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 104 Minimum Grade: D or BIO 122 Minimum
Grade: D or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 215 - Techniques in Cell Biology
A course designed to introduce students to the lad techniques used by cell biologists. Microscopy is used for cell structure and their organelles, phagocytosis, cytoskeletal structure, muscle contraction and cell motility. Other topics include fractional by centrifugation, protein separation and quantification, and gel electrophoresis. This is a writing intensive course.
Credits: 2.50
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 104 Minimum Grade: D or BIO 122 Minimum
Grade: D or TDEC 122 Minimum Grade: D or BIO 117 Minimum Grade:
D or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 217 - Evolution
Aspects of the fact of evolution are discussed in class, including early evolutionary thought, pivotal moments in the history of life, and evidences for evolution from fossils, genetics, and living organisms. Key concepts include natural selection, speciation, adaptation, vicariance, inclusive fitness, and evodevo. Non-scientific arguments pertaining to evolution are refuted.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

BIO 218 - Principles of Molecular Biology
The course is designed to familiarize students with the details and concepts revolving around molecular biology's "central dogma." Specifically the chemical nature of DNA and RNA, the molecular structure of DNA and chromosomes, the definition of a gene, how DNA is replicated, and how genes are expresses and regulated.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 122 Minimum Grade: D or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 219 - Techniques in Molecular Biology
Designed to familiarize student with laboratory techniques utilized in molecular biology, specifically DNA isolation, characterization, and manipulation. Students work in teams to collect and analyze data and explain results in laboratory reports. Weekly recitations preview and review theory and techniques used in the lab. Some or all prerequisites may be taken as either a pre-requisite or co-requisite. Please
see the department for more information. This is a writing intensive course.
Credits: 2.50
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 122 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

BIO 220 - Essential Microbiology
Covers morphological, physiological, and biochemical characteristics of bacteria, fungi, algae, and protozoa, and viruses. Introduces the principles of microbial genetics, disease, and control of
microorganisms. This course is identical to BIO 221.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not be enrolled in one of the following Major(s):
Biological Sciences
Pre-Requisites: BIO 122 Minimum Grade: D or BIO 141 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 221 - Microbiology
Covers morphological, physiological, and biochemical characteristics of bacteria, fungi, algae, protozoa, and viruses. Introduces the principles of microbial genetics, disease, and control of microorganisms.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: BIO 222
Pre-Requisites: BIO 122 Minimum Grade: D or BIO 141 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 222 - Microbiology Laboratory
An introduction to microbiological techniques, and culture of prokaryotic and eukaryotic organisms. Includes sterile techniques, and use of specialized microscopic techniques. Classical and molecular techniques of microbial identification are also covered.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Co-Requisites: BIO 221

Pre-Requisites: BIO 122 Minimum Grade: D or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 223 - Parasitology
Parasitology explores the most predominant lifestyle on earth, parasitism. Students will learn how parasites invade and exploit their hosts, the resultant damage to the hosts, and the mechanisms by which hosts defend and protect themselves from these invaders.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 122 Minimum Grade: D or BIO 124 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 224 - Form, Function \& Evolution of Vertebrates
This course is an introduction to principles of organismal biology from
the perspective of form, function and evolution of fish, amphibians, reptiles, mammals and birds. Many biological principles are well known in this group of animals. Data from areas as diverse as paleontology, ecology and molecular biology will be presented.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 121 Minimum Grade: D or BIO 122 Minimum
Grade: D or BIO 124 Minimum Grade: D or BIO 126 Minimum Grade: D Repeat Status: Not repeatable for credit

BIO 225 - Vertebrate Bio \& Evolution Lab
A hands-on laboratory course that complements BIO 224: Form, Function \& Evolution of Vertebrates. Students use the comparative approach to learn about the anatomy, physiology and evolution of vertebrates. Laboratory work will be on campus and in the field trips to observe vertebrates in nature.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 224 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

BIO 226 - Microbiology for Health Prof'I

An introduction to microbiology for students in the health professions. Covers the diversity of microorganisms, their growth and how to control them. An introduction to the principles of disease and pathogenicity, host interaction and immunological response.
Laboratories focus on the basic techniques to culture and student microorganisms.
Credits: 5.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

BIO 227 - Exploring Parasites
Exploring Parasites Laboratory will safely introduce students to handson experiences with a vast diversity of human parasites to understand their evolutionary adaptations. Students will learn to culture Giardia lamblia, an enteric parasite, and design a term-long research project to study an aspect of Giardia biology of student interest.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 223 Minimum Grade: C (May be taken
concurrently)
Repeat Status: Not repeatable for credit

BIO 231-Cell Physiology
Molecular biology of the cell, including regulation of function, genetic mechanisms, chemistry and structure of cellular components, and cell-to-cell interactions
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 214 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 244-Genetics I
Surveys Mendelian, microbial, molecular, and population genetics.
Discusses model systems and analytical methods used by geneticists to understand gene functions at cellular, organismal, and population levels.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 254 - Invertebrate Morphology \& Physiology
Provides comparative study of the major invertebrate groups, relationships between physiology and organismal structure, phylogenetic relationships and classification, development, and life histories.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: BIO 255
Pre-Requisites: BIO 100 Minimum Grade: D or BIO 101 Minimum
Grade: D or BIO 107 Minimum Grade: D or BIO 109 Minimum Grade: D or BIO 123 Minimum Grade: D or BIO 124 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 255 - Invertebrate Morphology \& Physiology Lab
This laboratory course provides a comparative study of the morphology of representative species from the major invertebrate groups. How their structural features relate to their physiology and behavior is emphasized. Identification of species, examining phylogenetic relationships, and understanding life histories will relate organisms to their ecological roles. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: BIO 254
Pre-Requisites: BIO 100 Minimum Grade: D or BIO 101 Minimum
Grade: D or BIO 107 Minimum Grade: D or BIO 109 Minimum Grade: D or BIO 123 Minimum Grade: D or BIO 124 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 256 - Vertebrate Morphology \& Physiology
Provides comparative study of the major vertebrate groups, relationships between physiology and organismal structure, evolutionary history, comparative anatomy, and development.
Credits: 5.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 224 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 260 - Plant Biology I
This course provides an understanding of phylogenetic relationships among plant families. Students see the practical results of evolution by examining and comparing the properties of existing plant families.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 101 Minimum Grade: D or BIO 104 Minimum Grade: D or BIO 109 Minimum Grade: D or BIO 141 Minimum Grade: D or BIO 123 Minimum Grade: D or BIO 124 Minimum Grade: D Repeat Status: Not repeatable for credit

BIO 262 - Plant Biology II
In this course, students learn the structure and function of higher vascular plants as organisms. Plant development, growth and behavior are examined at both the molecular and structural levels to give a comprehensive view of the plant and its environment.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 264 -Ethnobotany
This course explores the relation between ancient/cultural botanical knowledge and its current application in modern pharmacology and alternative forms of medicine. It provides an interdisciplinary approach to the study of plants for food, medicine, stimulation, religious rituals and death.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

BIO 270 - Development Biology

Covers molecular, cellular and physiological mechanisms underlying development of animals from gametes to adults. Covers the major stages and selected aspects of vertebrate development in importance animal model systems. Particular focus in on the importance of differential gene expression and its regulation in development.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 214 Minimum Grade: D and BIO 218 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

BIO 271 - Developmental Biology Laboratory
Includes observations into development processes in a diverse group of organisms including developmental principles in simple multicellular protests, gametogenesis in diverse animal, fertilization in sea urchins, embryonic development of vertebrates, regeneration of planarians, and the role of gene regulation in fruit fly development. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):

## Undergraduate Quarter

Pre-Requisites: BIO 270 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

## BIO 284 - Biology of Stress

This course focuses on the biological responses to the physical and psychological stress, discussing in turn stress responses in various organ systems. Emphasis is given to the analysis and evaluation of conflicting biological evidence on stress effects.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 100 Minimum Grade: D or BIO 101 Minimum
Grade: D or BIO 107 Minimum Grade: D or BIO 109 Minimum Grade: D
or BIO 122 Minimum Grade: D or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

## BIO 306-Biochemistry Laboratory

Covers biochemical techniques ranging from basic laboratory preparatory work such as making solutions to the measurement of enzyme kinetics and substrate specificity.
Credits: 2.00
College: Arts and Sciences

Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CHEM 242 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 310 - Comparative Physiology
Provides comparative study of the physiology of vertebrate and invertebrate animals. Examines physiological principles by studying cardiovascular adaptations, water balance, respiratory adaptations, and other homeostatic mechanisms in model systems, including fish, amphibians, mammals, birds, and invertebrates.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 201 Minimum Grade: D or BIO 224 Minimum
Grade: D or ENVS 284 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 311 - Biochemistry
Covers bioenergetics and metabolism; enzymes, substrates, products, coenzymes, transporters, pathways (catabolic and anabolic for carbohydrates, lipids, amino acids, and nucleotides). Intracellular regulation, intercellular regulation, and how all this serves to meet the need of the cell and organism.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CHEM 242 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 312 - Genetically Modified Foods
Covers the application of recombinant DNA techniques in the creation of genetically modified foods. Explores the many uses of these food.
Also covers the social, ethical and environmental issues involved in the use of genetically modified foods.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 100 Minimum Grade: D or BIO 107 Minimum
Grade: D or BIO 122 Minimum Grade: D or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 313 - Comparative Physiology Lab
Computational laboratory examining quantitative facets of vertebrate physiology through simulation experiments. Complements BIO 310
Comparative Physiology. Example systems examined include gas and solute exchangers, open vs closed circulations, and thermoregulatory controllers. Some or all pre-requisites may be taken as either a prerequisite or co-requisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 310 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

BIO 314 - Pharmacology
In this course, students will apply their studies of chemistry and biology to understand how drugs: are designed, affect the body, and are
affected by the body. Students can expect to learn the fundamentals of pharmacology, and to discuss current topics and novel approaches being used to design new therapeutics.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 318 - Biology of Cancer
In this course, students will apply their studies of cell and molecular
biology to understand cancer pathology. Starting with a fundamental
knowledge of normal cellular processes, students will learn how normal
processes go awry in tumor development and metastasis, and the
current approaches being used to develop new cancer therapeutics.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 214 Minimum Grade: D and BIO 218 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 320-Microbial Pathogenesis

Covers mechanisms of pathogenesis in microbial disease: transmission, prevention, public health. Also covers molecular basis of microbial pathogenesis.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 218 Minimum Grade: D and BIO 221 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 322 - Mycology
Covers morphology, taxonomy, and physiology of yeasts and molds, with emphasis on species of economic importance; plant and animal pathogens; industrial fermentations; toxin production; decomposition of organic materials; and fungal morphogenesis.
Credits: 4.50
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 221 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 331-Bioinformatics I
This course uses a combination of lecture and hands-on exercises to develop computational, algorithmic, and database navigation skills utilized in the analysis of genes and genomes. Topics include genomic databases, genome annotation, sequence alignment, metagenomic analyses, and phytogenetics.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 122 Minimum Grade: D or BIO 141 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 332 - Bioinformatics II
This course continues the application of computational algorithms for manipulation and analysis of biological information covered in BIO 331 (Bioinformatics I). It covers genomic and proteome informatic approaches and applications for determining evolutionary relationships, discovery of protein structure/function relationships and bioengineering of proteins by molecular modeling by homology Credits: 3.00

College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: BIO 331 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 333-Bioinformatics Laboratory
In this course, students develop and apply computational skills in bioinformatics to address a quarter-long research project. Topics generally focus on the ecology and evolution of microbes, which have become much easier to study thanks to the advent of molecular tools and software for the analysis of DNA sequences.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 122 Minimum Grade: D (May be taken
concurrently) or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 346 - Stem Cell Research
This course will focus on recent and important topics relevant to stem cell research and development. Topics will include nuclear reprogramming and epigenetics, environmental influences on stem cell differentiation, stem cells and cancer, stem-cell-based therapies for heart and neurodegenerative disorders, stem cells and ageing, and politics of stem cell research.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 368 - Embryology
This course surveys general features of developing systems, and
focuses on the developmental history of adult structures and functions in humans. Human developmental defects are also discusses.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 214 Minimum Grade: D or BIO 224 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 370 - Teratology
This course will expand on the concepts of developmental biology by examining the agents that interfere with normal development. We will be exploring these agents through presentations and discussion of current peer reviewed literature. The focus will be on an understanding of mechanisms of action and how they are influenced by dose pharmacology and genetics.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 270 Minimum Grade: D or BIO 368 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 386-Gross Anatomy
This course is to give students an understanding of Human Anatomy in a clinical format. Anatomy will be studied in a regional manner with an emphasis placed on landmarks and relationships of structure within a region.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: BIO 387
Pre-Requisites: BIO 214 Minimum Grade: D and BIO 218 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 387 - Gross Anatomy Lab
This course is to accompany the Gross Anatomy lecture course and complements the students study of human anatomy by allowing the student to hone their dissection skills through dissection of a preserved mammalian specimen.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: BIO 386
Pre-Requisites: BIO 214 Minimum Grade: D and BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 404-Structure and Function of Biomolecules

Covers the weak interactions which govern structure and function of biomolecules, including amino acids, proteins (structural organization, isolation, and methods of analysis). Enzymes (structure, catalytic mechanisms, kinetics), lipids and biomembranes, and DNA and RNA folding.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CHEM 242 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 406 - Computational Biochemistry Lab
This course uses kinetic analysis of biochemical data to increase the computational and numerical sophistication used to build sound models of the underlying biological processes. Students start with Excel as the analytical tool. MATLAB is then used as the complexity of the problems demands it.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CHEM 242 Minimum Grade: D
Repeat Status: Not repeatable for credit

## BIO 412 - Biology of Aging

Discusses ageing at the organismal, organ, cellular, and molecular
levels. Discussions include chronological verses biological aging, normal and abnormal human physiology of aging, current theories of aging, the effect of caloric restriction on aging, and the molecular mechanisms that underlie normal and abnormal aging.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 413-Genomics
This course aims to elucidate current technologies, theory, and applications of genomic research. Though a large emphasis will be placed on the use of genomic tools to study human health, we will also study the genomes, transcriptomes, and proteomes of bacteria, fungi, plants, and other animals.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Pre-Requisites: BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 415 - Proteins
Discusses protein structure, function, and isolation. Emphasizes
biochemical, biophysical, and molecular biological techniques.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 214 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 420 - Virology
Discusses the major viral groups, including biochemistry and molecular genetics of viral replication, structure, gene expression, latency, and role in disease.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 421-Biomembranes
The experimental and theoretical basis for the structure and function of
biological membranes will be surveyed. Topics include membrane self assembly, bilayer phase behavior and dynamics, membrane protein structure, passive and active transport, membrane fusion and trafficking.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: BIO 214 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 424 - Microbial Physiology
Covers physiology and metabolism of microorganisms with emphasis on aspects unique to prokaryotes, including envelope structure, transport systems, modes of nutrition, biosynthesis, growth, and mechanisms of action of antibiotics.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 221 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 426-Immunology
Covers the fundamental concepts of innate and adaptive immunity, including the molecular and cellular mechanisms that generate
responses to a broad spectrum of infectious threats, self-non-self recognition, immune regulation.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 214 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 427-Immunology Lab
Students will gain a more thorough understanding of the complexities of the mammalian immune system and will receive hands on experience with common models used in immunology labs. This course complements the Immunology lecture course (BIO 426). Some or all pre-requisites may be taken as either a pre-requisite or co-requisite.
Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 426 Minimum Grade: D (May be taken
concurrently)
Repeat Status: Not repeatable for credit

## BIO 430-Cell Biology of Disease

An introduction to the pathobiology of human disease as it relates to principles of cytoskeleton and membrane biology. The course reviews basic intracellular mechanisms and examines how they go awry in respiratory, heart and kidney diseases, diabetes, cancer, neurodegeneration and during viral and microbial infections.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 214 Minimum Grade: D

Repeat Status: Not repeatable for credit

BIO 433 - Advanced Cell Biology
Course covers chemical composition and cellular function of organelles and other cellular structures, intra- and inter- cellular regulatory processes, intercellular communication, genetic mechanisms and analytical techniques.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following Major(s):
Biological Sciences
May not have the following Classification(s):
Pre-Requisites: BIO 214 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 434 - Advanced Cell Biology Lab
Course covers fundamentals of growth, division and homeostasis of mammalian cells grown in culture. Students perform experiments on cells to monitor cellular morphology, including subcellular structures and specific regulatory proteins. Techniques include fluorescent microscopy, cell transfection and subcellular fractionation. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information. This is a writing intensive course.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Graduate Quarter
Undergraduate Quarter
Must be enrolled in one of the following Major(s):
Biological Sciences
Must have the following Classification(s):
Senior
Pre-Requisites: BIO 433 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

BIO 435-Immunobiology of Disease
This course will expand on the concepts of molecular immunology
focusing on emerging concepts in immunology research, immunopathologies, failure of host defense and current clinical concepts.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 426 Minimum Grade: D

Repeat Status: Not repeatable for credit

BIO 442 - Modeling Methods in Biology I
Offers practical experience in the modeling of simple biological systems, including the applications of linear, trigonometric, and exponential functions in biology and the use of differential and integral calculus, simple differential equations, and the Eulerian approach to simulation. Emphasizes practical computational use of such tools in biological problems. Offered in alternate years.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

BIO 443 - Modeling Methods in Biology II
Offers a practical introduction to the modeling of dynamic biological processes, including deterministic and stochastic processes.
Emphasizes the development and construction of working models and
the interpretation of results. Discusses both mechanistic and
empirical/predictive models. Students develop their own model of a
real-world biological process. Offered in alternate years.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 442 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 444 - Human Genetics
Covers the fundamentals and principles of genetics with an emphasis on their relevance to human genetics and disease. Topics include human genetic disorders, pedigree analysis and genetic testing, cytogenetics, epigenetics, genetics if cancer, gene therapy, stem cell research, human genomics and biotechnology.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 445-Microbial Genetics
Covers genetic organization and regulation in bacteriophage and bacteria, techniques of genetic manipulation of microbial genomes,
genetic interactions of microbes under natural conditions and the use of microbial genome modification in industry.
Credits: 5.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 218 Minimum Grade: D and BIO 221 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 447 - Advanced Genetics \& Molecular Biology
Covers classical prokaryotic and eukaryotic genetics; DNA/RNA structure; DNA replication, transcription, translation and regulation of these processes. Also covers major molecular techniques used for characterizing prokaryotic and eukaryotic genes, tools for analysis of genomes, and applications of molecular genetics research.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Biological Sciences
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 218 Minimum Grade: D and BIO 244 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 449 - Recombinant DNA Laboratory
Covers procedures of DNA isolation and purification, insertion of DNA sequences into plasmid cloning vectors, introduction of plasmids into appropriate host cells, and methods of recovering and analyzing cloned DNA.
Credits: 5.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 451-Genetic Reg Development
Covers molecular and genetic control of morphogenesis and cellular differentiation. Focuses on differential gene function and the interaction between the nucleus and the cytoplasm.
Credits: 3.00
College: Arts and Sciences
Department: Biology

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 270 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 462 - Biology of Neuron Function
Covers molecular and cellular mechanisms underlying neuron function.
Topics include: molecular and cellular biology of neurons and neural
development; molecular biology and physiology of sensory and motor neurons; molecular biology of muscle function; molecular and cellular basis of learning and memory in model organisms.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 201 Minimum Grade: D or BIO 218 Minimum
Grade: D
Repeat Status: Not repeatable for credit

BIO 463 - Mol Mech of Neurodegeneration
This is an advanced course on the current, primary literature in the area of neurodegeneration. Students are expected to be conversant in areas of Genetics, Cell Biology, Molecular Biology, Biochemistry, and Neurobiology. This is a discussion course based on reading current manuscripts from the primary literature. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 214 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 465 - Neurobiology of Disease
The objective of the course is to provide a basic understanding of molecular and cellular biology of disorders of the human nervous system. Advances developed form experimental models that have armed clinicians and basic scientists with new tools for diagnosis and treatment of disease and injury will be presented.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 214 Minimum Grade: D and BIO 218 Minimum
Grade: D and BIO 462 Minimum Grade: D

Repeat Status: Not repeatable for credit

BIO 466 - Endocrinology
Describes the classical hormones, their regulation and major clinical abnormalities. New directions in endocrinology, such as cellular regulation and cellular mediators of hormonal action are also considered. The major focus of the course will be on mammals, although some examples involving other vertebrates are included. Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: BIO 100 Minimum Grade: D or BIO 107 Minimum Grade: D or BIO 122 Minimum Grade: D or BIO 141 Minimum Grade: D Repeat Status: Not repeatable for credit

BIO 471 - Seminar in Biological Sciences
Discusses and evaluates selected current topics in bioscience and biotechnology. Includes presentations by outside speakers.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Must be enrolled in one of the following Major(s):
Biological Sciences
Must have the following Classification(s):
Senior
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

BIO 472 - Seminar in Biological Science
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Biological Sciences
Must have the following Classification(s):
Senior
Pre-Requisites: BIO 471 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

BIO 473 - Seminar in Biological Science
This is a writing intensive course.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Must be enrolled in one of the following Major(s):
Biological Sciences
Must have the following Classification(s):
Senior
Pre-Requisites: BIO 472 Minimum Grade: D
Repeat Status: Not repeatable for credit

BIO 480 - Special Studies Biological Science
Covers special topics offered in biology. Current offerings include Biotechnology, Biology of Cancer, Ethnobiology, Neurobiology, and Bioinformatics, as well as other selected topics of interest in molecular biology, genetics, and biotechnology.
Credits: 12.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

BIO 497 -Research
Provides guided research in biology, molecular biology, microbiology, cell or human physiology, genetics, biochemistry, or biotechnology.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

BIO 498 - Independent Study
Provides independent study in biology, molecular biology,
microbiology, cell or human physiology, genetics, biochemistry, or
biotechnology.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

## Chemical Engineering Chemistry Courses

CHEC 352 - Physical Chemistry and Applications II
Equilibrium electrochemistry and transport; Covers electrochemical cells, Nernst equation, fuel cells, batteries, electrolytic solutions, transfer processes, Fick's laws, diffusion, ion transport, introduction to simple quantum mechanical systems.
Credits: 4.00

College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: (PHYS 211 Minimum Grade: D or PHYS 102 Minimum Grade: D or PHYS 201 Minimum Grade: D or PHYS 153 Minimum Grade:
D ) and (CHEM 252 Minimum Grade: D or CHEM 253 Minimum Grade:
D or ENGR 210 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEC 353 - Physical Chemistry and Applications III
Kinetics and spectroscopy; Covers reaction kinetics, steady state approximation, chain reactions and unimolecular reactions, optical spectroscopy; Beer's Law, atomic spectra/simple atomic models, rotational and vibrational spectra, Raman spectra, term symbols and selection rules, lasers, molecular statistics, partition functions. Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: (PHYS 211 Minimum Grade: D or PHYS 153 Minimum Grade: D or PHYS 102 Minimum Grade: D or PHYS 201 Minimum Grade: D ) and (CHEM 252 Minimum Grade: D or CHEM 253 Minimum Grade:
D or ENGR 210 Minimum Grade: D ) and (CHEC 352 Minimum Grade: D or CHEM 355 Minimum Grade: D )
Repeat Status: Not repeatable for credit

## Chemistry Courses

CHEM 050-Preparatory Chemistry
This online course covered general chemical principles, such as stoichiometry, atomic and molecular structure, and characterization of chemical reactions.
Credits:
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CHEM 100-Chemistry
Chemistry and its significance to industry and life, with discussions revolving around synthesis and use of polymers and biologically significant molecules
Credits: 2.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CHEM 101-General Chemistry I
Covers fundamental principles of chemistry, stoichiometry, atomic and molecular structure, chemical bonding, states of matter,
thermochemistry, and periodicity.
Credits: 3.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 080
Pre-Requisites: DU Chemistry Placement Exam Minimum Grade: 12 or CHEM 111 Minimum Grade: D or CHEM 050 Minimum Grade: D Repeat Status: Not repeatable for credit

CHEM 102-General Chemistry II
Covers chemical equilibrium, including acid-base equilibria in solution; electrochemistry; organic chemistry; polymers; and petroleum.
Credits: 4.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 080
Pre-Requisites: CHEM 101 Minimum Grade: D or CHEM 161 Minimum
Grade: D
Repeat Status: Not repeatable for credit

CHEM 103-General Chemistry III
Covers organic functional groups, biochemistry, inorganic and coordination compounds, chemical kinetics, thermodynamics, and nuclear chemistry.
Credits: 5.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 080
Pre-Requisites: CHEM 102 Minimum Grade: D or (CHEM 162 Minimum Grade: D and CHEM 164 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 108-Health Chemistry I
Covers physical and chemical properties of substances used in medical areas and related principles: atomic structure, bonding, gases, solutions, acids and bases, oxidation-reduction and the chemistry of hydrocarbon compounds and polymers. Examples are taken from pharmacology, nutrition and other allied health fields.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 080

Repeat Status: Not repeatable for credit

CHEM 110-Environmental Chemistry
Chemistry of the environment; the ecological aspects. Discussion of problems related to the pollution of the atmosphere, natural waters, and soil from a chemist's point of view.
Credits: 2.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CHEM 111-General Chemistry I
Not open to engineering or science majors. Introduces the principles of general chemistry. Covers SI units, unit factor calculations, states of matter, elements and compounds, energy, atoms, electronic configurations, ionic and covalent bonds, Lewis dot structures, shapes of molecules, chemical equations, stoichiometry, molarity, gas laws, nuclear chemistry, equilibrium between different states of matter, and some colligative properties of solutions.
Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following College(s)/School(s):
Arts and Sciences
Co-Requisites: EXAM 080
Repeat Status: Not repeatable for credit

CHEM 112-General Chemistry II
Introduces organic chemistry. Covers some classes of organic compounds from alkanes to amines, basic reactions of important functional groups, uses of some compounds, stereochemistry, synthetic and natural polymers (carbohydrates, protein, DNA), and briefly acids and bases.
Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 111 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 113-General Chemistry I Laboratory
Covers chemical and physical properties and techniques for inorganic, organic, and polymeric compounds, including distillation, crystallization, chromatography, separation.
Credits: 1.50
College: Arts and Sciences
Department: Chemistry

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following College(s)/School(s):
Arts and Sciences
College of Engineering
Co-Requisites: CHEM 111
Repeat Status: Not repeatable for credit

CHEM 114-General Chem II Lab
Continuation of CHEM 113
Credits: 1.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following College(s)/School(s):
Arts and Sciences
College of Engineering
Co-Requisites: CHEM 112
Repeat Status: Not repeatable for credit

CHEM 151-Applied Chemistry
For business majors. Covers physical and chemical properties of substances used in consumer products. Provides qualitative introduction to required principles, including atomic structure and the elements, bonding and compounds, and the chemistry of carbon compounds and polymers. Uses examples from the areas of food and nutrition, pharmacology, and the petrochemical industry.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following College(s)/School(s):
Arts and Sciences
College of Engineering
Co-Requisites: EXAM 080
Repeat Status: Not repeatable for credit

CHEM 161-General Chemistry I
Covers atomic structure, stoichiometry, gases, valence theory, and
thermochemistry.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 003 Minimum Grade: D or (MATH 001 Minimum
Grade: D and MATH 002 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 162-General Chemistry II
Covers solutions, colligative properties, chemical equilibrium, and electrochemistry. Introduces organic chemistry.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 161 Minimum Grade: D or CHEM 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 163-General Chemistry III
Continues organic chemistry. Introduces thermodynamics, molecular biology, inorganic chemistry, chemical kinetics, and nuclear chemistry. Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 164 Minimum Grade: D and CHEM 162 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 164-General Chemistry Laboratory I
Involves experiments demonstrating the principles of gas behavior, thermochemistry, colligative properties, chemical equilibrium, and electrochemistry. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: CHEM 162 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

CHEM 165-General Chem Lab II
Involves experiments illustrating the principles of organic separations, transition metal chemistry, complex ions, chemical kinetics, and qualitative analysis. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: CHEM 163 Minimum Grade: D (May be taken concurrently)

CHEM 201 - Why Things Work: Everyday Chemistry
Course will cover chemical explanations of everyday materials and phenomena. The focus will be conceptual understanding, as opposed to a detailed quantitative treatment.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CHEM 230-Quantitative Analysis
Covers chemical analysis and data treatment, including chemical
equilibrium, acid-base and redox reactions, and applications to
gravimetric and titrimetric methods.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 102 Minimum Grade: D or (CHEM 162 Minimum
Grade: D and CHEM 164 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 231-Quantitative Analysis Laboratory
Provides laboratory studies in quantitative analysis. This is a writing intensive course. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 230 Minimum Grade: D (May be taken
concurrently)
Repeat Status: Not repeatable for credit

## CHEM 241-Organic Chemistry I

Covers structure, reactions, and stereochemistry of organic
compounds, especially alkanes, cycloalkanes, haloalkanes, and alkenes.
Also covers SN1, SN2, E1, and E2 compound.
Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 102 Minimum Grade: D or (CHEM 162 Minimum
Grade: D and CHEM 164 Minimum Grade: D )

CHEM 242-Organic Chemistry II
Covers structure, reactivity, and stereochemistry of organic compounds, especially alkanes, alkynes, alcohols, ethers, dienes, and aromatic compounds. IR, MS, and NMR spectral techniques are introduced and applied to the identification of organic compounds. Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 241 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 243-Organic Chemistry III
Covers structure, preparation, reactivity, and stereochemistry of organic compounds, especially substituted aromatics, aldehydes, ketones, carboxylic acids, carboxylic acid halides, anhydrides, amides, polypeptides, esters, amines, phenols, and carbohydrates.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 242 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 244-Organic Chemistry Laboratory I
Introduces simple recrystallization, distillation, extraction, and chromatography techniques and applies them to several organic reactions illustrative of topics covered in CHEM 241. Provides opportunity to take and interpret IR and GC spectra.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 241 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 245-Organic Chemistry Laboratory II
Provides experiments illustrating a number of organic reactions covered in CHEM 242 as well as more advanced organic techniques.
Provides opportunity to take and interpret IR and GC scans. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Pre-Requisites: CHEM 242 Minimum Grade: D (May be taken concurrently) and CHEM 244 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 252 - Physical Chemistry I
Thermochemistry; Covers gas properties, gas laws, equations of state, first, second and third laws of thermodynamics, energy and entropy, phase stability and phase transitions, phase diagrams.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: (CHEM 102 Minimum Grade: D and MATH 123
Minimum Grade: D ) or TDEC 121 Minimum Grade: D or (CHEM 162
Minimum Grade: D and CHEM 164 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 253 - Thermodynamics \& Kinetics
Covers gas properties, gas laws, state functions, first, second, and third laws of thermodynamics, phase transformations, phase diagrams, chemical equilibrium, spontaneous reactions, Gibbs free energy, molecular motion, diffusion, rates of chemical reactions, rate laws, molecular reaction dynamics, transition states, electron transfer.
Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 102 Minimum Grade: D or (CHEM 162 Minimum
Grade: D and CHEM 164 Minimum Grade: D ) and MATH 200 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

CHEM 256 - Physical Chemistry for Biological Sciences
Covers elementary chemical thermodynamics and homogeneous reaction kinetics as bases for experiment and phenomenology in
biology and biochemistry, including properties of molecules in solution.

## Credits: 4.50

College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 101 Minimum Grade: D or CHEM 161 Minimum
Grade: D
Repeat Status: Not repeatable for credit

CHEM 270-Software Skills for Chemists
Course covers mathematical, computational, and professionals skills useful to chemists. Representation of chemical problems in mathematical language; use of software to: solve mathematical
problems that arise in chemistry; process, analyze and present data; visualize and analyze molecular structures. Also covers the American Chemical Society guidelines for professionalism in chemistry.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 102 Minimum Grade: D and (PHYS 201 Minimum
Grade: D or PHYS 211 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 346-Qualitative Organic Chemistry
Covers identification of pure organic compounds, physical constants, solubilities by semi-micro techniques, infrared and nuclear magnetic resonance spectroscopy, and separation and identification of mixtures. Credits: 5.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 243 Minimum Grade: D and CHEM 245 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 355 - Physical Chemistry IV
Computational methods of modeling molecules; Covers potential energy functions and surfaces, molecular conformations, failures of classical physics, the quantum hypothesis, the classical wave equation and the origins of the Schrodinger equation, particle-in-a-box, linear variation functions, molecular orbitals from linear combinations of atomic orbitals, Pauli principle, molecular calculations and their interpretation.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: (CHEM 252 Minimum Grade: D or CHEM 253 Minimum Grade: D ) and (CHEM 270 Minimum Grade: D or PHYS 160 Minimum
Grade: D ) and (MATH 201 Minimum Grade: D or MATH 210 Minimum
Grade: D ) and CHEC 352 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 356-Physical Chemistry Lab
Provides experiments in physical chemistry for engineering students.
Some or all pre-requisites may be taken as either a pre-requisite or corequisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Chemistry
Restrictions:

May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: CHEM 241 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

CHEM 357-Physical Chemistry Lab I
Provides experiments illustrative of topics included in CHEM 251 and
CHEC 352. This is a writing intensive course. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (CHEM 252 Minimum Grade: D or CHEM 253 Minimum
Grade: D ) and (PHYS 211 Minimum Grade: D or PHYS 201 Minimum
Grade: D ) or CHEC 352 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 358-Physical Chemistry Lab II
Continues CHEM 357.
Credits: 2.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 357 Minimum Grade: D and (CHEM 252
Minimum Grade: D or CHEM 253 Minimum Grade: D or CHEC 352
Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 359-Atomic/Molecular Spectroscopy
Emission and absorption of light, laser principles, optical spectrometers, atomic spectroscopy. LS-coupling, Zeeman effect, magnetic resonance spectroscopy, EPR, NMR, ENDOR, molecular spectroscopy of diatomic and polyatomic molecules, rotational, vibrational and electronic, fluorescence spectroscopy, two-photon spectroscopy, time resolved spectroscopy, photo-electron
spectroscopy.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHEM 355 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 361 - Advanced Organic Chemistry Lab
Emphasizes experimental design, data collection, and interpretation in such areas as reaction mechanism and molecular structure
determination. Not offered every year.
Credits: 2.50
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 243 Minimum Grade: D and CHEM 245 Minimum
Grade: D
Repeat Status: Not repeatable for credit

CHEM 364-Spectroscopic Analysis
Covers interpretation of spectra for the determination of structure of organic molecules. Stresses use of infrared, nuclear magnetic
resonance, and mass spectrometry. Fall. Not offered every year.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 243 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 367-Chemical Information Retrieval
This course examines methods for retrieving literature information, via standard tabulations, journals, and abstracts, using both hard-copy and electronic sources. Includes techniques for online searching of databases such as Chemical Abstracts, Beilstein, and crystallographic depositories.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CHEM 371-Chemistry of Biomolecules
This course is a chemistry-based approach to understanding the basic structure, chemical reactivity, and biological function of biomolecules $\dot{¿}$ including amino acids, peptides, proteins, carbohydrates, nucleic acids, and lipids. A special emphasis will be given to topics in the frontiers of biomolecular research at the interface between chemistry and biology. Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Pre-Requisites: CHEM 243 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 420 - Molecular Symmetry and Group Theory-Chemistry Applies the principles of simple group theory to molecular structure and to electronic and motional properties of molecules, including crystal field and molecular orbital methods.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 421 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 421 - Inorganic Chemistry I
Covers crystal, atomic, and molecular structure; modern chemical
bonding; and magnetic properties of inorganic systems.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 252 Minimum Grade: D or CHEM 253 Minimum
Grade: D or ENGR 210 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 422 - Inorganic Chemistry II
Covers organometallic and coordination compounds, substitution mechanisms, and bio-inorganic chemistry.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 420 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 424 - Special Chemistry Problems
Allows theoretical and laboratory investigations of a particular problem of interest to the individual student. A written report may be required. Credits: . 50 to 12.00
College: Arts and Sciences
Department: Chemistry
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

CHEM 425 - Inorganic Chemistry Lab
Covers synthesis of properties of inorganic compounds, magnetic measurements, spectroscopic properties, and interpretations of complex ion structure. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 422 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

CHEM 430-Analytical Chemistry I
Provides an introduction to statistics (particularly the development and use of analytic calibration curves), basic electronics, and the principles of spectroscopic methods of analysis, including the interaction of light with matter and basic instrument design.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 230 Minimum Grade: D and CHEM 242 Minimum Grade: D and (CHEM 252 Minimum Grade: D or CHEM 253 Minimum
Grade: D or CHEC 352 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 431 - Analytical Chemistry II
Continues CHEM 430. Covers principles of chromatographic methods of analysis. Lab includes experiments on atomic absorption, fluorescence, infrared absorption, UV/visible absorption, gas chromatography, high performance liquid chromatography, basic electronics, and potentiometry/coulometry. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman

Pre-Requisites: CHEM 430 Minimum Grade: D or ENGR 210 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 465-Synthetic Polymer Chemistry
Explores scope of polymer science; structure-property relations; step,
free radical, cationic, group-transfer, metathesis, coordination, and
ring-opening polymerizations; and stereochemistry of polymerizations
and reactions of polymers.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 242 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHEM 466-Physical Chemistry of Polymers
Covers kinetics and thermodynamics of polymerizations; control of polymerization processes; gelation theory; copolymerization; and determination of polymer molecular weight and distribution by membrane osmometry, light-scattering, solution viscosity, and other techniques.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 242 Minimum Grade: D and (CHEM 252
Minimum Grade: D or CHEM 253 Minimum Grade: D )
Repeat Status: Not repeatable for credit

CHEM 467 - Polymer Chemistry III
Covers spectroscopy of polymers; rubber elasticity; morphology;
viscoelasticity; thermal analysis; computational methods; testing,
fabrication, and processing; and magnetic and mechanical properties of polymers.
Credits: 3.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: CHEM 252 Minimum Grade: D or CHEM 253 Minimum
Grade: D or CHEC 352 Minimum Grade: D or ENGR 210 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

CHEM 480-Special Topics in CHEM
This course covers a selected special topic in chemistry. May be repeated three times for credit.
Credits: 5.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 3 time(s) for 15.00 credit(s)

CHEM 493-Senior Research Project
Provides individualized research with a faculty member in any number of chemical disciplines. Requires written report. May be repeated three times for credit.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Chemistry
Must have the following Classification(s):
Junior
Senior
Repeat Status: Course can be repeated 3 time(s) for 12.00 credit(s)

CHEM 497-Research
Covers research problems in several areas of chemistry. Requires written report.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Chemistry
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Chemistry
Repeat Status: Course can be repeated 98 time(s)

## Chinese Courses

CHIN 101-Chinese I
Introductory Mandarin Chinese. Includes listening, speaking, and reading, with individual audiolingual practice. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CHIN 102-Chinese II
Continues CHIN 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 103 - Chinese III
Continues CHIN 102. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 201 - Chinese IV
Intermediate Chinese. Includes listening, speaking, reading, and writing, with individual audiolingual practice. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 202-Chinese V
Continues CHIN 201. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 203 - Chinese VI: Conversation \& Composition
Provides intensive practice in comprehension and written and oral communication. Emphasizes development of writing skills and increased oral competence in everyday situations. Offered as needed. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Pre-Requisites: CHIN 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 301 - Chinese VII
Advanced Chinese. Includes reading, writing, and extensive conversational practice. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 302 - Chinese VIII
Continues CHIN 301. Covers techniques of translation and
communication. Provides advanced practice in translation,
comprehension, and written and oral communication. Offered as
needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 303-Chinese IX
Continues CHIN 302. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 302 Minimum Grade: D
Repeat Status: Not repeatable for credit

CHIN 399 - Advanced Independent Study in Chinese
Provides supervised study of special subjects in Chinese language and
literature. Scheduled as needed.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

CHIN 411 - Introduction to Chinese Stylistics

Fourth year of Chinese. Provides advanced practice in translation, comprehension, and written and oral communication. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

CHIN 431 - Introduction to Chinese Literature
Provides intensive reading, writing, and conversational practice in Chinese, based on selected texts in Chinese literature. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

CHIN 451 - Introduction to Business \& Professional Chinese
Fourth year of Chinese. Provides intensive oral practice and written work in business, professional, and commercial Chinese. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CHIN 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

CHIN 480 - Chinese Minor Thesis Course
Independent research study on a topic selected by the student.
Independent study is supervised by a faculty member and guided by a
plan of study. At the end of the course, the student is required to
produce a paper and oral defense on the topic of his paper.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

COM 101 - Human Communication
This course explores the elements of basic human communication what does it mean to communicate? What makes communication good or bad? What is the nature of verbal and non-verbal messages? What does it mean to communicate in a group? How does culture affect communication?
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

COM 111 - Principles of Communication
Explores the importance of communication in organizational settings. Includes assessment of appropriate modes of communication, including written, spoken, and electronic.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

COM 150 - Mass Media and Society
Provides an overview of the history, economic structure, regulation, and impact of the mass media in the United States.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

COM 210-Theory and Models of Communication
Surveys historical and contemporary attempts to understand the process of human communication, using examples from the literature of interpersonal, group, organizational, and mass communication. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

This course provides a detailed investigation of the nature, application, analysis and write up of qualitative research in communication and the social sciences, including such topics as ethnography, in-depth interviews, focus groups, participant observation, and narrative analysis.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

COM 230-Techniques of Speaking
A workshop course in improving public speaking skills. Provides experience in speeches of explanation, persuasion, and argument.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Pre-Requisites: HUM 102 Minimum Grade: D or HUM 105 Minimum
Grade: D or HUM 107 Minimum Grade: D or ENGL 102 Minimum
Grade: D or ENGL 105 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 240-New Technologies In Communication
Provides an overview and survey of the changes taking place in the technologies of information production, distribution, storage, and display, including the interaction of these changes with legal, social, cultural, and communications systems.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

COM 260 - Fundamentals of Journalism
A workshop course in news reporting. Covers interviewing, editing, and writing for the mass media and for business, industrial, and trade publications. Explores the history of the field and changes in journalistic practices. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):

Pre-Requisites: HUM 102 Minimum Grade: D or HUM 105 Minimum Grade: D or HUM 107 Minimum Grade: D or ENGL 102 Minimum Grade: D or ENGL 105 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 265 - Radio Journalism
This course will familiarize students with the creation of podcasts and other scripted content, as well as radio production for journalism, digital audio editing, and writing in radio narrative style. Students will be able to enter a radio news-room and be able to handle gathering and preparing new stories, anchoring, and preparing longer-form narrative stories.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: COM 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 270 - Business Communication
Covers the writing of business letters, resumes, memos, proposals, and reports. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum Grade: A or HUM 108 Minimum Grade: D or ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 280 - Public Relations
The course focuses on the principles of public relations. It introduces students to theory and practice of PR taught in the context of real life material and situations. The course also covers main public relations techniques, tools, and types of publics.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Pre-Requisites: HUM 102 Minimum Grade: D or HUM 105 Minimum
Grade: D or HUM 107 Minimum Grade: D or ENGL 102 Minimum
Grade: D or ENGL 105 Minimum Grade: D
Repeat Status: Not repeatable for credit

This course will focus on advanced aspects of public relations: how to analyze, plan, and conduct public relations campaigns systematically and scientifically. A great deal of attention will be paid to the analysis of real life public relations cases. At the end of the course students create full-scale PR plans, including budget and media material.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: COM 280 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 282 - Public Relations Writing
Students will develop the professional level writing skills expected of public relations practitioners. The objectives for this course include building an understanding of PR writing styles and genres as a persuasive influence and learning how to use basic information in different PR formats. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: COM 280 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 290 - Sports and the Mass Media
To explore the interrelationships between professional and college sports and the mass media. Students will look at how news media coverage has changes sports, the conventions found in sports
journalism, promotion and marketing of sports teams and leagues, and how sponsorship of sporting events changes the nature of these

## events.

Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum
Grade: A or HUM 107 Minimum Grade: D or ENGL 103 Minimum Grade:
D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 300-On-line Journalism
Students will explore how to use computers and the internet to add depth and context to news stories. Students will conduct database searches and analyses, and access a wide variety of records from governmental agencies, all in the pursuit of two news stories. The
impact of journalism of blogging will also be studied; students will develop and maintain their own news blogs. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
May not have the following Classification(s):
Pre-Requisites: COM 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 305 - Sports Journalism
To gain a deeper appreciation for and understanding of the meaningmaking power of sports journalism. We will explore the history of sports journalism, review and critique examples of historically significant sports writing and write game stories and columns based on actual coverage of local and on-campus sporting events.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: COM 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 310-Technical Communication
Develops skills in communicating technical information. Focuses on writing letters, resumes, proposals, reports, and instructions. Offers extensive writing practice along with exercises and presentations. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum Grade: A or HUM 108 Minimum Grade: D or ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 311 - Dynamics of Interpersonal Communication
This course provides the student with a more thorough understanding of the communication dynamics between individuals. By reviewing scholarly writing on the subject and performing direct observations and analyses, students will acquire an appreciation of the complexities of interpersonal communication and enhanced communication skills. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: COM 210 Minimum Grade: D

Repeat Status: Not repeatable for credit

COM 315-Investigative Journalism
Mastery of investigative reporting tactics and strategies enables
student to explore and write about issues of great importance to the community.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: COM 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 316-Campaigns for Health \& Environment
This seminar-style course explores theories and practical aspects of environmental and health campaigns and community-based social marketing campaigns. This course has a strong applied component.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

COM 317-Environmental Communication
This reading and writing intensive course will explore communication about environmental issues. Topics can include advocacy campaigns, social marketing, environmental journalism, media coverage of environmental issues, green marketing, the environment in popular culture, risk communication, and public participation.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

COM 318 - Film, Celebrity and the Environmental Movement Using the framework of mass media and behavioral change theories, we will look at the environmental movement through the lends of ¿eco celebrities¿ and mainstream environmental films and will discuss how Hollywood shapes our perceptions of the environment and whether this has helped or hurt the environmental movement.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

COM 320-Science Writing
A workshop course in writing on scientific subjects. Includes analysis of the current market for science writing; examination of exemplary
pieces of science writing; instruction in finding article ideas, interviewing, and working with editors; and production of featurelength articles. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum
Grade: A or HUM 108 Minimum Grade: D or ENGL 103 Minimum Grade:
D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 325-The Cultural Significance of Fame
We will explore why fame is so important to us. Why do so many of us want it so badly? Why do we envy those who have it? What does the pursuit of fame say about us and about society? You will explore your own perception of fame, dissect your fame-related experiences, and analyze how the mass media keep us thinking and talking about fame. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: COM 150 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 330-Professional Presentations
A workshop course in the theory and practice of making effective professional presentations for the technical and business professional. Provides a systems approach to the planning, production, and presentation of visual/aural programs.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: COM 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 335 - Electronic Publishing
Electronic Publishing gives students applied and theoretical knowledge of professional electronic publishing. Students will focus on issues relating to writing and integrating text and graphics to create websites and on-line publications. Students will also consider how issues in document design and usability can be used to evaluate websites.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: D or HUM 103 Minimum Grade: D or HUM 105 Minimum Grade:
D or HUM 108 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 340 - Desktop Publishing
Covers production of publications using desktop publishing software, including planning, writing, designing, and budgeting of institutional magazines, newsletters, manuals, and brochures. Requires students to design several pieces (letterheads and flyers).
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum
Grade: A or HUM 108 Minimum Grade: D or ENGL 103 Minimum Grade:
D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 342 - English Worldwide
This course provides an overview of the spread of English globally, by examining English as a language of trade, diplomacy, and education, as well as its status as an aesthetic and market force. For a final project, students research how English is utilized for social, economic, and political purposes in a single area of the world.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum
Grade: A or HUM 108 Minimum Grade: D or ENGL 103 Minimum Grade:
D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 345 - Intercultural Communication

This course introduces students to the theory and practice of intercultural communication. Drawing from traditions in anthropology and communication, intercultural communication is the study of the effect of differing cultural norms and beliefs upon communication between speakers. Through a wide range of readings, journal writing assignments, and participative and experiential activities, students will develop both their understanding of and skills in inter-cultural communication. A final project and presentation draws together participative experiences and the readings and class discussions. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites:
Repeat Status: Not repeatable for credit

COM 350 - Message Design and Evaluation
Introduces the principles and practice of designing messages and measuring their effectiveness with audiences. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

COM 351-Computer Mediated Communication
We focus on practices and affordances of Computer Mediated Communication (CMC). We consider how computer technology is used in social interaction and its practical consequences. We focus on social practices and uses of technology. We use qualitative methods of analysis to understand the practices of CMC.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: COM 220 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 355 - Ethnography of Communication
Examines theories and methods of qualitative language and communication studies. Topics include story telling, greetings, gossip, self-presentation in talk, language of ritual and religion, men and
women's roles in communication, and communicative events and competence. Case student in literature will be analyzed and will form a basis for the students' own ethnographic fieldwork.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum
Grade: A or HUM 108 Minimum Grade: D or ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 360 - International Communication
Examines the political, cultural, technological, and economic processes
and effects of international communication flow.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites:
Repeat Status: Not repeatable for credit

COM 361 - International Public Relations
The course is designed give students a comprehensive overview of international issues in PR including such areas as: history and evolution of the field of international PR; image-formation and image-changes process; PR in war and conflict; as well as effect of different political and legal systems on the field of public relations.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: HUM 103 Minimum Grade: D or HUM 105 Minimum
Grade: A or HUM 108 Minimum Grade: D or ENGL 103 Minimum Grade:
D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

COM 362 - International Negotiations
This course is designed to give students a comprehensive overview of the field including different theoretical points of view on the process of international negotiations; the role of perceptions in this process; the role of internal politics and cultural variables in the process of international negotiations.
Credits: 3.00

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Pre-Junior
Senior
Repeat Status: Not repeatable for credit

COM 363 - Event Planning
This course will provide the student with the theoretical and practical fundamentals in understanding the complexities of producing Special Events across all major industries. Special Events addresses all elements of the communication process.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

COM 365 - Journalists, the Courts, and the Law
Students explore and apply techniques for covering the court system, and explore case law and recent key legal developments that have reshaped how journalists do their jobs.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: COM 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 370-Advanced Business Writing
Covers application of policy manuals and research, analytic, design, and critical skills to produce corporate documents, such as proposals and reports. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: COM 270 Minimum Grade: D
Repeat Status: Not repeatable for credit

Students explore the grant writing process, from the development of an idea and researching appropriate contributors, to writing a fully realized grant proposal, complete with budget. Course topics also include surveying the political and social climate before developing an idea, assessing an organization's capabilities to handle a project, and performing through literature reviews. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: COM 270 Minimum Grade: D or COM 310 Minimum
Grade: D or SOC 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 380-Special Topics in Communication Theory
Provides advanced communication studies covering various subjects in
interpersonal, group, organizational, and mass communication. May be taken for credit twice.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Course can be repeated 98 time(s) for 998.99 credit(s)

COM 384 - Free Speech \& Censorship
In this course, students will explore the various forms --some obvious, some not-- that censorship takes. Also explored will be what those who hold dissenting views endure as they try to contribute to the national dialogue. Historical and legal perspective on censorship will also be considered.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

COM 385 - Media Effects
Some people believe that the mass media rule our lives, making us fat, violent, sexist, etc. Some think that media are irrelevant. Of course these arguments are extreme and simplifications. In this course, we ask: What are the facts regarding media effects research?
Credits: 3.00

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

COM 390 - Global Journalism
Explores the issues facing journalists covering foreign affairs. Students will research and write news stories on issues of global import and will examine the work of foreign correspondents from historical and critical perspectives. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: COM 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 399 - Independent Project
Provides a course of independent study on a project for one term only.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

COM 400-Seminar in Communication
This is an upper-level seminar in various topics in Communication, including but not limited to Rhetoric. Students will undertake an indepth examination of critical texts or themes in Communication. The course is intended for upper-level majors in Communication and can be repeated for credit with a different topic.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: COM 210 Minimum Grade: D
Repeat Status: Course can be repeated 4 time(s) for 12.00 credit(s)

Continues COM 310. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: COM 310 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 420-Technical Editing
Introduces the theory and practice of technical editing, including
project and copy editing.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: COM 270 Minimum Grade: D or COM 310 Minimum
Grade: D or COM 375 Minimum Grade: D or COM 410 Minimum Grade: D
Repeat Status: Not repeatable for credit

COM 491 - Senior Project in Communication I
Covers planning and execution of a professional project that integrates the academic and practical knowledge the student has acquired in his or her major.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following Major(s):
Communication
Must have the following Classification(s):
Senior
Pre-Requisites: COM 210 Minimum Grade: D and (COM 220 Minimum
Grade: D or SOC 250 Minimum Grade: D )
Repeat Status: Not repeatable for credit

COM 492 - Senior Project in Communication II
Requires completion and evaluation of the project begun in COM 491.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following Major(s):

Communication
Must have the following Classification(s):
Senior
Pre-Requisites: COM 491 Minimum Grade: D
Repeat Status: Not repeatable for credit

## Criminal Justice Courses

CJ 204 - Criminology
Criminology is the scientific study of crime, criminal behavior and societal responses to crime and to crime victims. Students will study theories of crime causation, crime types, ethics of research, data collection and methods of crime prevention and control. Issues such as capital punishment, gun control and restorative justice will be debated. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 206 - Criminal Justice
Criminal Justice is the study of the agencies that apprehend, adjudicate, sanction, and treat criminal offenders. Students will study the history, policies, procedures and issues regarding these agencies. Court and prison visits will give students an opportunity to augment academic knowledge with direct observation.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

CJ 265 - Criminal Investigation
The initial crime scene investigation can make or break subsequent crime solving and conviction of offenders. What does one look for? Who has responsibility for the collection of evidence and the resulting chain of custody? Who has authority in cases that involve several states and federal law enforcement?
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

CJ 266 - Crime Prevention Planning
This course examines the current literature on effective crime prevention programming and planning. Students will be expected to be able to analyze physical and social risk factors for criminal events.
Students will also explore methodologies for strategic planning and will
use this knowledge to develop a crime prevention plan for the campus or a community.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 267 - Introduction to Security Studies
This course will explore the historical evolution of private security, public policy issues related to privatization of criminal justice systems, legal issues of security and analytic models for security vulnerability assessments. A final project will include an analytically and theoretically sound security assessment of a building or a facility.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 273 - Surveillance, Technology and the Law
This course will examine current surveillance technologies used by criminal justice agencies and private sector organizations and the laws that regulate government surveillance and protect privacy.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 274 - Sex, Violence \& Crime on the Internet
This course explores how offenders are adopting computers to commit traditional crimes in a hi-tech manner. Specific attention will be paid to how the Internet has affected the structure of hate groups and the child pornography and sexual predator subcultures. Cyber-stalking and online harassment will also be examined.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

CJ 275 - Issues in Domestic Violence
Domestic Violence is a major public health problem. This course will describe DV in the context of multiple response systems including health care, police, advocacy, and criminal justice. We will explore how

DV affects men, women and children and examine societal conditions that allow DV to occur and continue.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CJ 276 - Introduction to Computer Crime<br>This course provides an overview of computer crime. Emphasis will be placed on the legislative responses and policy issues related to computer intrusions and cyber-fraud. Issues encountered when enforcing laws in cyberspace and the public/private sector initiatives for dealing with computer crime will also be explored.<br>Credits: 3.00<br>College: Arts and Sciences<br>Department: Culture and Communication<br>Restrictions:<br>Must be enrolled in one of the following Program Level(s):<br>Undergraduate Quarter<br>May not have the following Classification(s):<br>Repeat Status: Not repeatable for credit

CJ 277 - Introduction to Correctional Practices
This course will provide insight into corrections through theory, laws and contemporary practices, facilities management, reentry and alternatives to incarceration. Corrections involve the 'treatment and rehabilitation of offenders through a program involving penal custody, parole, and probation' (Merriam-Webster). This course will include site visits, guest lecturers and case analysis.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CJ 278 - Introduction to Law Enforcement
Law enforcement, generally the first point of contact, is the largest of the three Criminal Justice agencies. A solid understanding of the missions, strategies and controversies of policing is essential to citizens and Criminal Justice students. The reality is more complicated than preventing crimes and catching criminals.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

CJ 280 - Communities and Crime

This course is an examination of classical and contemporary theories of the social ecology of communities and how this social ecology relates to crime. Further, we will explore the impact of community development activities on crime outcomes in neighborhoods. We will examine the importance of race and class in forging effective community based development models. Lastly, we will examine specific community based solutions to crime and disorder problems.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

CJ 282 - Community Policing
Community Policing, a new law enforcement philosophy, involves partnering with communities to identify and solve problems proactively. We will examine the multi-dimensional strategies necessary for Community Policing to be effective and for it to be significantly more satisfactory for the community policed and those policing.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

## CJ 289 - Terrorism

This course will view terrorism from a historical perspective. Various forms of governments and social constructs will be scrutinized as to their impact on human rights issues. Students will study the causes and consequences of domestic and international terrorist activity and discuss the delicate balance between security and freedom. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

## CJ 290 - Crime and Public Policy

This course focuses on criminal justice and non-criminal justice policies used to combat crime. Students will use the most recent crime data and explanatory theories on crime to evaluate current policy. A multidisciplinary approach will be used to develop new policies designed to have a long-lasting impact on crime.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

CJ 360 - Juvenile Justice
Students will learn about the history, development and current status of the juvenile justice system. Philosophical, sociological, psychological, legal and political factors contributing to the changes in the manner in which society processes children and youth who violate social norms will be explored in research articles, legal decision, and theoretical analyses.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 362-Gender, Crime \& Justice
Course examines the different experiences and needs of female criminal justice professionals, crime victims and offenders using field trips, guest experts, videotape, new theories, legislation, policies and discussions.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CJ 206 Minimum Grade: D or CJ 204 Minimum Grade: D Repeat Status: Not repeatable for credit

CJ 364 - Community Corrections
Costly, unnecessary and impractical incarceration of every offender emphasizes the importance of community-based alternatives which are more effective and less expensive. Course includes field trips, guest experts, and discussion.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 365 - Computer Investigation and the Law
This course will examine the techniques used to investigate internet crimes and extract evidence from digital storage devices. Specific attention will be paid to the procedural laws that govern digital forensic techniques and investigations involving electronic evidence.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CJ 274 Minimum Grade: D or CJ 276 Minimum Grade: D Repeat Status: Not repeatable for credit

CJ 369 - Forensic Science Survey Course
This course will survey various forensic disciplines with emphasis on their role within the criminal justice system. The course will familiarize students with methods and techniques currently employed in the crime scene processing, drug identifications, trace evidence, bloodstain pattern analysis, entomology, DNA, other disciplines, ethics, and expert testimony. The course is taught by trained in-service forensic scientists. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 372 - Death Penalty - An American Dilemma
Capital Punishment is a complex and controversial issue. Opinions about the death penalty are rarely grounded in hard evidence. This course will examine the history of the use of capital punishment in
America: the case law and the issues which rise from the use of the Ultimate Sanction.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 373 -Environmental Crimes
An examination of the criminal consequences of the violation of laws, regulations and policies governing clean water, air and toxic
substances. Analysis of case studies from a variety of perspectives
including crime scene investigations and potential terrorism.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CJ 374 - Restorative Justice
Restorative justice is a paradigm shift in criminal justice in response to the failure of the traditional retributive model to meet the needs of victims, offenders and the community. Programs have developed worldwide often sponsored by governments, others by non-profits, to handle both juvenile and adult criminal offences more effectively. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter

Pre-Requisites: CJ 206 Minimum Grade: D
Repeat Status: Not repeatable for credit

CJ 375-Criminal Procedure
Understanding the historical and contemporary significance of the Bill of Rights especially the 4 th, 5 th, and 6th amendments is critically important in the practice of law and law enforcement. Real life conflicts in the application of constitutional criminal procedure and tensions between due process and crime control will be discussed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: CJ 206 Minimum Grade: D
Repeat Status: Not repeatable for credit

CJ 376 - Sentencing: The History, Necessity and Morality of Punishment in America
The course is an exploration of punishment, its various philosophies, theories and approaches. The costs and outcomes of incarceration as well as alternatives will be examined as well as disparities regarding age, gender, race in our sentencing. A review of the ultimate sanction, the death penalty will complete the course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CJ 206 Minimum Grade: C
Repeat Status: Not repeatable for credit
CJ 377 - Intellectual Property Theft in the Digital Age
This seminar focuses on the changing nature of intellectual property
theft in the Digital Age. Attention will be paid to legislative solutions for
protecting intellectual property and the challenges faced when
investigating the theft of intellectual property. Additionally, theoretical
explanations to account for intellectual property theft will be explored.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

CJ 378-Science of Forensic Science
Students will study actual casework to learn how to apply scientific method to evidence analysis and translation of results to criminal court
hearings and trials. In this ONLINE course students will play the virtual role of analyst, gathering crime scene evidence and presenting it at trial.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 102 Minimum Grade: D or CHEM 101 Minimum
Grade: D or BIO 151 Minimum Grade: D or CHEM 151 Minimum Grade:
D or CHEM 111 Minimum Grade: D
Repeat Status: Not repeatable for credit

## CJ 379 - Forensic DNA Analysis

An introduction to DNA analysis methods in current forensic testing .
Genetics, inheritance, DNA biochemistry are applied to a fluorescent detection technology to produce results using one or more manufactured DNA testing kits. Students will be exposed to actual casework data and as virtual analyst present results to juries and judges.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: BIO 104 Minimum Grade: D or CHEM 102 Minimum
Grade: D or CHEM 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

CJ 380-Special Topics
This course will explore current issues and interests in Criminal Justice.
The topic will vary each term
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 999.00 credit(s)

## CJ 381 - Legal Research \& Writing I

Course provides instruction fundamentals of legal research and writing. Legal databases and law resources will be used. Students will learn legal writing styles to produce professionally acceptable documents.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

CJ 382 - Legal Research \& Writing II

This course builds on the fundamentals of Legal Research \& Writing I.
Students will use databases and other resources. Advanced skills in legal writing styles will be developed. Professionally acceptable documents will be produced.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: CJ 381 Minimum Grade: D
Repeat Status: Not repeatable for credit

CJ 390 - Internships in Criminal Justice
Internships provide opportunities for students to clarify career interests; synthesize prior academic knowledge with direct experience; and sharpen critical thinking, analytical, and observational skills. Direct participation in the criminal justice system allow for testing theory with practice. Learning from and networking with professionals in the field is enhanced. This is a writing intensive course.
Credits: 3.00 to 6.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 1 time(s) for 6.00 credit(s)

## CJ 399 - Independent Study

Provides a course of independent study in Criminal Justice. Topics for study must be approved in advance of registration by the advisor and the instructor involved.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 999.00 credit(s)

CJ 400 - Critical Issues in Criminal Justice
The capstone course will be open only to Criminal Justice Seniors. It will serve as an opportunity for them to demonstrate their cumulative learning to the major by looking on the most challenging issues in the field. Students, divided into groups, will research the topics, draft a report and present and defend it before an audience of Criminal Justice students. The knowledge and skills obtained through four years as a Criminal Justice major will be reflected in their work. This course will be a writing intensive course as multiple drafts of their thesis will be reviewed and critiqued before the final report is written and accepted.
(Topic will reflect contemporary issues and one subject to choose.) Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Must be enrolled in one of the following Major(s):
Criminal Justice
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

## English Courses

ENGL 101 - Expository Writing and Reading
Develops students' abilities to read and write expository academic discourse. Teaches students how to read with understanding; how to access print and technological sources; how to research, plan, draft, revise, and edit academic essays and reports. Requires students to write expository essay and to keep a journal to express their responses to material read and study in the course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENGL 102 - Persuasive Writing and Reading
Develops students' abilities to read and write persuasive academic discourse. Teaches students to think and read critically, to evaluate and use print and technological sources effectively, and to present a written argument effectively. Requires students to write persuasive essays and research papers and to keep a journal to express their responses to material read and studied in the course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENGL 103 - Analytical Writing and Reading
Develops students' skills in critical and analytical reading and writing through a study of literature. Teaches students techniques to help them understand and appreciate literature. Requires students to read, analyze, and write essays and research papers about selected works of poetry, drama, and fiction and to keep a journal to express their responses to the literature studied.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: ENGL 102 Minimum Grade: D or ENGL 105 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENGL 105 - Honors Freshman English
Develops students' abilities to read and write expository and persuasive academic discourse. Teaches students the components of the writing process and strategies to think and read critically and to present a written argument. Requires students to write expository and persuasive essays and research papers and to keep a journal to express their responses to the material read and studied in the course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Honors Program
Repeat Status: Not repeatable for credit

ENGL 200 - Classical to Medieval Literature
A survey of Greek and Roman literature (Homer, Aeschylus, Euripides, Virgil and Cicero), up to and including the Medieval period (Aquinas, Cavalcanti, Chaucer, and Dante). This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

ENGL 201 - Renaissance to the Enlightenment
A survey of Western literature from the Renaissance to the Enlightenment, focusing on works by Cervantes, Erasmus, Rabelais, Petrarch, Voltaire, Rousseau, Swift and Pope.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 202 - Romanticism to Modernism
A survey of Western literature of the 19th and 20th centuries focusing on the major periods of Romanticism (Blake, Coleridge and Keats), Realism (Balzac and Ibsen), and Modernism (Kafka, Borges and Woolf). This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

ENGL 203 - Post-Colonial Lit I
A survey of nonwestern literatures produced before the modern era in Asia, Africa, and the Middle East, representing the more important periods and genres. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

ENGL 204 - Post-Colonial Lit II
A survey of nonwestern literatures written in the 20th century by writers from Asia, Africa, and the Middle East, and focusing on the effects of social, aesthetic and contemporary events on artistic creation.

Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

ENGL 205 - American Literature I
A survey of American literature from Colonial times through the Civil War, including works by such writers as Anne Bradstreet, Emily Dickinson, Frederick Douglass, Cotton Mather, Ralph Waldo Emerson, Nathaniel Hawthorne, Herman Melville, Henry David Thoreau and Walt Whitman. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman

Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 206-American Literature II
A survey of American literature from the Civil War through the 21st century, including works by such writers as Kate Chopin, W.E.B. Du Bois, T.S. Eliot, William Faulkner, F. Scott Fitzgerald, Henry James, Philip Roth, Mark Twain and John Updike. This is a writing intensive course. Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 207 - African American Literature
Introduces students to African-American Literature, from the mid-18th century to the present. Provides a basic understanding of social, political and cultural influences and an awareness of the AfricanAmerican literary tradition. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 211 - British Literature I
A historical survey of British literature from its beginning to the end of the eighteenth century. Students will read texts selected to represent major authors, forms and thematic material that illustrates the development of English literature through the medieval, Renaissance, seventeenth, and eighteenth centuries This is a writing intensive course.

Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 212 - British Literature II
A historical survey of British literature form the turn of the nineteenth century to the present; students will read texts selected to represent major authors, forms and thematic material of the Romantic, Victorian and modern periods.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum

## Grade: A

Repeat Status: Not repeatable for credit

ENGL 214 - Readings in Fiction
A basic course, which focuses on fiction as a genre through the study of a variety of short stories and fiction, organized by theme, period or form. One of three genre courses.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

ENGL 215 - Readings in Poetry
A basic course which focuses on poetry as a genre through the study of a variety of poems organized by theme, period or form. One of three genre courses. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

ENGL 216 - Readings in Drama
A basic course which focuses on drama as a genre through the study of a variety of plays organized by theme, period or form. One of three genre courses. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 300 - Literature \& Science
This course studies the impact of scientific and technological change on works of literature and art produced in various historical periods. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 302 - Environmental Literature
This course explores the relatively recent discipline of Ecocriticism and considers the literary relationship between human beings and the natural environment--both altered and unaltered by human activity. The approach is interdisciplinary in its investigation of the relationships among science, culture, and personal observation. Students will read a selection of seminal texts of American environmental literature.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

ENGL 303 - Science Fiction
Provides reading and discussion of works illustrating the development of modern science fiction.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 304 - Young Adult Fiction
This course introduces students to young adult (YA) fiction and to secondary sources useful for the appreciation of it. Topics discussed include: young adults as $n$ audience, the genres of YA fiction, keeping
up with YA fiction, literary and psychological theory applied to YA fiction.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum

## Grade: A

Repeat Status: Not repeatable for credit

ENGL 305 - The Mystery Story
A study of the mystery story, from its inception as a genre in the 19th
century to the present, through short stories and novels. This is a
writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 306 - Literature of Baseball
An examination of novels, short stories, and poetry about our "national pastime" that illumine American ideals and values, history and culture from 1845 to the present. A study of how the game's symbols and rituals, its history and mythology help us understand American belief systems and ideologies.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 307 - Literature of the Holocausts
To underline the fact that more than one Holocaust has occurred, the course offers different points of view about the systematic slaughter of several religious and ethnic groups, pre-and post-World War II, through fiction, children's literature and films.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman

Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 308 - The Literature of Business
In this advanced reading course, students read literary works about business and work and write analytically about these works, grounding that analysis in nonfiction readings from business publications. Course writing assignments ask students to respond to problems and issues raised in the texts.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: (ENGL 101 Minimum Grade: D and ENGL 102 Minimum Grade: D and ENGL 103 Minimum Grade: D ) or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 310 - Period Studies
This is a variable topics course, focusing on the literature of a particular period (i.e., Classical Literature; Victorian Literature; the Harlem
Renaissance). May be repeated for credit. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Course can be repeated 98 time(s) for 998.99 credit(s)

ENGL 312 - Research Project Development
Acquisition of knowledge and skills related to the development of researchable original ideas that involves literature, philosophy, history, or any other humanities area, or a creative work or portfolio.
Credits: 1.00 to 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Course can be repeated 2 time(s) for 6.00 credit(s)

ENGL 315 - Shakespeare

This course focuses on Shakespeare's major plays and sonnets, providing the historical and cultural contexts that gave rise to his work. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum

## Grade: A

Repeat Status: Course can be repeated 98 time(s) for 998.99 credit(s)

ENGL 320 - Major Authors
A course focused on intensive study of one or more authors, for example: Jane Austen; Joseph Conrad; Hemingway, Faulkner and Fitzgerald; Writers of the Harlem Renaissance; Carlos Fuentes and Gabriel Garcia Marquez. May be repeated for credit. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Course can be repeated 1 time(s) for 6.00 credit(s)

ENGL 323 - Literature and Other Arts
A variable topics course which studies relationships between literature and one or more of the visual arts, theater or music (i.e., Surrealism; Memoir and Documentary Film; The Faust Legend). May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: D
Repeat Status: Course can be repeated 1 time(s) for 6.00 credit(s)

ENGL 325 - Topics in World Literature
A variable topics course which focuses on a particular national or regional literature within its cultural, historical and political contexts (i.e., African Literature; French Literature; Latin American Literature). May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Course can be repeated 1 time(s) for 6.00 credit(s)

ENGL 330 - The Bible as Literature
This course provides a close reading of selected books of the Old and New Testaments alongside selected literary works to discover both the literary qualities of these texts and their influence on literature.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 335 - Mythology
This course investigates the specific forms mythological stories have taken in the literature, art and ritual of some or all of the following: Greece, Rome, Iceland, Mesopotamia and Native American and European cultures in the United States.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 345 - American Ethnic Literature
A variable topics course which studies the literature of one or more of the United States ethnic populations within their historical and cultural contexts. May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

ENGL 350 - Jewish Lit and Civilization
Focuses on the Jewish Bible, a classic literary document of Western civilization, deemed by many people of the world as fundamental to their religion; stresses aspects of cultural diversity and awareness.

Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

ENGL 355 - Women and Literature
This course focuses on literature written by, and/or about women and considers issues relating to women's place in literary history. May be repeated for credit. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum

## Grade: A

Repeat Status: Course can be repeated 98 time(s) for 998.99 credit(s)

ENGL 360 - Literature and Society
This course examines the relationship between literature and the society it reflects and helps shape. May be repeated for credit. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Course can be repeated 98 time(s) for 998.99 credit(s)

ENGL 365 - Topics in African Amer Lit
A variable topics course designed to further develop the ideas first presented in the African American Lit survey by exploring, in much more depth, significant authors, periods, and genres within the African American literary and cultural tradition. Topics include Science and Technology in African American Lit; the Slave Narrative; and Black Travel Writing.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A

Repeat Status: Course can be repeated 2 time(s) for 6.00 credit(s)

ENGL 370 - Topics in Lit and Medicine
This is a variable topics course which focuses on aspects of illness, healing, care-giving, aging, grief, and mortality as presented in narrative. Exploration of how literary construction and analysis affect understanding of these experiences. Topics include ?lllness and Healing in Literature? and ?The Physician in Literature and Film.? May be repeated three times for credit.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

ENGL 380 - Literary Theory
This course examines literary theoretical thinking, and focuses on twentieth century structuralism, post-structuralism, and contemporary theory. We will examine the ways in which language is conceived and reconceived by major theoretical writers and the implications of this rethinking for conceptualizations of history, politics, ideology, sexuality, and trauma, among others.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: ENGL 101 Minimum Grade: C and ENGL 102 Minimum Grade: C and (ENGL 202 Minimum Grade: C or ENGL 203 Minimum Grade: C or ENGL 204 Minimum Grade: C or ENGL 205 Minimum Grade: C or ENGL 206 Minimum Grade: C or ENGL 211 Minimum Grade: C or ENGL 212 Minimum Grade: C or ENGL 214 Minimum Grade: C ) Repeat Status: Not repeatable for credit

ENGL 395 - Special Studies in Literature
This is a variable topics course, providing intense literary study on a specific theme. May be repeated for credit. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Course can be repeated 98 time(s) for 998.99 credit(s)

ENGL 399 - Ind Project in Literature
This course provides independent study on a project for one term only. Credits: . 50 to 12.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

ENGL 470 - Capstone Seminar in Medical Humanities
This seminar gives students the opportunity to synthesize, contextualize, and deepen their understanding of how disciplines in the humanities and the social sciences approach the experiences and implications of illness, aging, mortality and healing. Regular guest lecturers, discussion of assigned readings, student presentations, and written projects.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program(s):
Certificate AS-HSS
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: (ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: D ) and HUM 315 Minimum Grade: B
Repeat Status: Not repeatable for credit

ENGL 490 - Seminar in English/American Literature
An advanced course with variable topics in British or American
Literature stressing textual analysis, cultural and historical contexts and research; provides students with intensive preparation for advanced and professional studies.
Credits: 4.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English
Must have the following Classification(s):
Junior
Senior
Repeat Status: Course can be repeated 3 time(s) for 12.00 credit(s)

ENGL 492 - Seminar in World Literature
An advanced course with variable topics in World Literature stressing textual analysis, cultural and historical contexts and research; provides students with intensive preparations for advanced and professional studies.
Credits: 4.00
College: Arts and Sciences

Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English
Must have the following Classification(s):
Junior
Senior
Repeat Status: Course can be repeated 3 time(s) for 12.00 credit(s)

ENGL 499 - Senior Project in Literature
Open to English Majors only, the senior project in literature should reflect the student's interest in a specific subject, author or theme and should demonstrate the student's research, critical and analytical expertise at an advanced, pre-professional level.
Credits: 4.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

## English as a Second Language Courses

ESL 001 - Foundtns Univ Study
This course provides ESL students with a foundation for University success through developing academic skills and strategies and promoting awareness of the academic and co-curricular culture of the American university.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 002 - Foundtns Acad Writ
This course introduces ESL students to the academic essay and the process approach to writing as well as reading for different purposes. Credits:
College: Arts and Sciences
Department: English Language Center Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

This course introduces ESL students to the skills of critical reading for information, specifically summarizing and evaluating source material. Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 010 - Listening and Speaking I
Low beginning English as a second language. Provides intensive instruction in the development of the following skills: speaking and listening in everyday situations, vocabulary, pronunciation, and grammatical functions. Placement testing is required. Offered all terms.

## 7.5-0-0

Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 011 - Reading and Writing I
Low beginning English as a second language. Provides intensive instruction in the development of the following skills: reading comprehension, simple inferring, basic vocabulary development, sentence and paragraph writing, basic grammatical structures, and the ability to communicate ideas orally and in writing. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 012 - English in Everyday Life
Low beginning English as a second language. Prepares students who have trouble talking with and understanding native English speakers in everyday situations such as going to the store or the bank, asking for directions, using the telephone, etc. Placement testing is required.
Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 013 - Beginning Grammar

Beginning English as a second language. Provides instruction and practice in such areas of English grammar as simple verb tenses, sentence structure, modals, and irregular verbs. Placement testing is required. Offered all terms.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 020 - Listening and Speaking II
High beginning English as a second language. Provides intensive instruction in the development of the following skills: speaking and listening (participating actively in spoken interactions and responding appropriately), vocabulary related to topics in the course,
pronunciation and intonation patterns, and grammatical functions.
Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 021 - Reading and Writing II
High beginning English as a second language. Provides intensive instruction in the development of the following skills: reading comprehension, inferring, vocabulary development, non-academic paragraph writing, basic grammatical structures and mechanics, and the ability to communicate ideas orally and in writing. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 022 - Grammar \& Pronunciation Wkshop
High beginning English as a second language. Emphasizes grammar, vocabulary, pronunciation, and idioms. Gives students a chance to improve and practice their English skills. Focuses on spoken and written standard American English. Placement testing is required. Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 023 - Intermediate Grammar
Beginning English as a second language. Provides instruction and practice in such areas as complex and compound sentence structure, past tense verbs, and clause structure. Placement testing is required
Offered as needed.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 024 - Presentations with Stories \& Legends
Beginning to low intermediate. English as a second language. Provides instruction and practice in reading comprehension, writing, listening, and presentations using stories from a variety of sources. Placement testing is required.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s)
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 030 - Listening and Speaking III
Low intermediate English as a second language. Provides intensive instruction in the development of the following skills: pronunciation (sounds, stress, intonation), vocabulary, listening/speaking (participating and responding appropriately in discussions, following directions, completing listening activities), grammatical competence, and repair of communication breakdown. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 031 - Reading and Writing III
Low intermediate English as a second language. Provides intensive instruction in the development of the following skills: reading comprehension, inferring, vocabulary development, academic paragraph and essay format, grammatical structures and mechanics, and the ability to communicate ideas orally and in writing. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 032 - English for Business Purposes
Intermediate English as a second language. Provides communication skills needed to do business with English speakers. Topics include small talk and telephone skills, participation in business meeting, presentations, communication through business letters and memos, and business negotiation. Placement testing is required. Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 033 - Idioms in American Culture Intermediate English as a second language. Presents videos of popular American television as a basis for learning vocabulary and idiomatic expressions which are commonly used in the United States. Placement testing is required. Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 034 - Understanding the News Media
Intermediate to advanced English as a second language. Emphasizes listening, discussion, and reading skills as students learn to read newspaper articles and listen to news from a variety of sources. Provides instruction on how the news is made and evaluated. Placement testing is required.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 035 - Vocabulary Development 3-4 Intermediate English as a second language. Provides strategies to improve academic, general, and technical vocabulary; to discover common roots in English words; and to improve reading skills. Placement testing is required. Offered all terms. 3-0-0 Credits:
College: Arts and Sciences

Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 040 - Listening and Speaking IV
High intermediate English as a second language. Provides intensive instruction in the development of the following skills:
pronunciation/fluency (sounds, stress, intonation, linking, phrasing), vocabulary, listening/speaking (participate appropriately in spoken interactions, understand news, mini-lectures), repair of communication breakdown, and grammatical competence. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 041 - Reading and Writing IV
High intermediate English as a second language. Provides intensive instruction in the development of the following skills: reading comprehension, inferring, vocabulary development, academic essay format, grammatical structures and mechanics, and the ability to communicate ideas orally and in writing. Placement testing is required.
Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 042 - Advanced Grammatical Analysis
High intermediate to advanced English as a second language. Provides instruction and practice in such areas of advanced English grammar as usage of verb tenses, indirect speech, conditional sentences, clause structure, and the passive voice. Placement testing is required. Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 043 - Oral Presentations 4-6
High intermediate to advanced English as a second language. Focuses on preparing, presenting and evaluating presentations. Explores ways to engage audience. Provides techniques for using language, voice and
body to improve performance. Increases comfort, confidence and competence. Placement testing is required. Offered all terms. 3-0-0 Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 044 - Skills for College Success
High intermediate to advanced English as a second language. Addresses academic skills topics such as listening to lectures and note taking, reading textbooks and synthesizing information, conducting research, and expanding awareness of the United States academic environment. Placement testing is required. Offered all terms.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

## ESL 045 - TOEIC Preparation 4-6

High intermediate to advanced English as a second language. Introduces skills and strategies that are helpful in taking the TOEIC test. Improves listening and reading comprehension skills. Focuses on analyzing types of test questions commonly asked and learning strategies for answering the questions. Placement testing is required.
Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 046 - TOEFL Preparation 4-6
High intermediate to advanced English as a second language. Prepares students to take the Drexel Institutional TOEFL exam and the computer-based TOEFL. Provides instruction in the listening comprehension, structure and written expression, vocabulary and reading comprehension sections of the TOEFL. Placement testing is required. Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 047 - Test of Spoken English Prep
High intermediate to advanced English as a second language. Prepares students to take Test of Spoken English or the institutional version of the test (SPEAK). Provides practice to improve skills needed for the TSE. Offers strategies to identify and answer the questions on the test. Placement testing is required. Offered as needed. 2.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 048 - TOEFL iBT Preparation Reading \& Writing
High Intermediate to advanced English as a second language. Prepares students to take the Internet Based TOEFL (Test of Foreign Language)
for academic purposes. Provides instruction in the reading and writing sections of the TOEFL. Placement testing is required.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 050 - Listening and Speaking V
Low advanced English as a second language. Provides intensive instruction in the development of the following skills: pronunciation/fluency (ease, speed, smoothness of speaking), vocabulary, listening/speaking (participate appropriately in spoken interactions, understand news reports, lectures), repair of communication breakdown, and grammatical competence. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 051 - Reading and Writing V
Low advanced English as a second language. Provides intensive instruction in the development of the following skills: reading comprehension, inferring, vocabulary development, academic essays and the use of source material, grammatical structures and mechanics, and the ability to communicate effectively in writing. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Repeat Status: Not repeatable for credit

ESL 052 - Vocabulary Development 5-6
Advanced English as a second language. Provides strategies to improve academic, general, and technical vocabulary; to discover common roots in English words; and to improve reading skills. Placement testing is required. Offered all terms. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 053 - Advanced Academic Writing 5-6
Advanced English as a second language. Develops students' skills in academic writing and the use of appropriate rhetorical patterns. Develops students' ability to check writing for organization, adequate development, and correct grammatical usage. Provides instruction on summarizing, paraphrasing, quoting, and citing sources. Placement testing is required. Offered as needed. 3-0-0 Credits:
College: Arts and Sciences
Department: English Language Center Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

## ESL 054 - Adv Acad Listening Discussion

Advanced English as a second language. Develops students' ability to listen to lectures and take comprehensive notes. Required students to listen actively and retries information from notes for discussion. Improves ability to clarify, summarize, paraphrase, and support opinions appropriately, coherently and accurately. Placement testing is required. Offered as needed. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 055 - Strategies for Acad Reading
Advanced English as a second language. Improves reading comprehension. Provides skills for defining and identifying main and supporting ideas, recognizing transitional words and their role in meaning, and finding organizational patterns. Explores the authors' purpose, opinion, and tone. Placement testing is required. Offered as needed. 3-0-0
Credits:
College: Arts and Sciences

Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 056-GMAT Preparation 5-6
Advanced English as a second language. Provides instruction for GMAT reading. Offers strategies to identify key parts of an argument and reviews grammatical and stylistic rules in the sentence correction section. Analyses arguments. Provides instruction for essay writing.
Placement testing is required. Offered as needed. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 057 - Advanced Idioms in American Culture
High Intermediate to advanced English as a second language. Provides strategies to improve idiomatic language using a variety of authentic sources. Instruction includes listening to radio and television
broadcasts. Placement testing is required.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 058 - Exploring American Life \& Language
Intermediate to advanced English as a second language. Students practice research skills on the internet and in the library and visit interesting places in the area to increase knowledge about the culture of America and Philadelphia. As a final project, students create a short movie about their experiences. Placement testing is required. Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 059 - TOEFL iBT Preparation Listening and Speaking High intermediate to advanced English as a second language. Prepares students to take the Internet Based TOEFL (Test of a Foreign Language)
for academic purposes. Provides instruction in the listening and speaking sections of the TOEFL. Placement testing is required. Credits:
College: Arts and Sciences
Department: English Language Center Restrictions:
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 060 - Listening and Speaking VI
Advanced English as a second language. Provides intensive contentbased instruction in the development of the following skills: pronunciation/fluency (ease, speed, smoothness of speaking), vocabulary, listening/speaking (participate appropriately in spoken interactions, understand news reports, lectures), grammatical competence, repair of communication breakdown. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 061 - Reading and Writing VI
Advanced English as a second language. Provides intensive instruction in the development of the following skills: reading comprehension, inferring, academic writing (including research paper with synthesis, summary, reaction, analysis, and citation of sources), grammar and mechanics, and effective communication in writing. Placement testing is required. Offered all terms. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 070 - GLOBE Business Information Intermediate to advanced level English as a second language. Develops students' ability to read business material, understand key vocabulary and discuss current events in the business sector. Provides instruction in reading and understanding case studies. Placement testing is required. Offered as needed. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 071 - GLOBE Business Communication
Intermediate to advanced level English as a second language. Improves students' ability to effectively communicate in business setting. Offers strategies for negotiation and provides instruction on cross-cultural communication styles. Placement testing is required. Offered as needed. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ESL 072 - Business Sites Visits
Intermediate to advanced level English as a second language. Prepares students to observe American business practices on site. Develops research skill. Provides instructions and practice in organizing and making presentations as well as letter writing skills. Placement testing is required. Offered as needed. 3-0-0

## Credits:

College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 073 - Intro to Business Research
Intermediate to advanced level English as a second language.
Introduces students to the research process of business related topics
and exposes them to American culture and conversation through
interaction. Offered as needed. 7.5-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 074 - IELTS Oral Skills Test Preparation
High intermediate to advanced English as a second language. Prepares
students to take the IELTS (International English Language Testing
System) for academic and professional purposes. Provides instruction
in the listening, speaking, reading, and writing sections of IELTS.
Placement testing is required.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 075 - IELTS Reading and Writing
High intermediate to advanced English as a second language. Prepares students to take the IELTS (International English Language Testing System) for academic and professional purposes. Provides instruction in the reading and writing sections of IELTS. Placement testing is required.
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
English as a Second Language
Repeat Status: Not repeatable for credit

ESL 080 - Prep for Intl Teaching Asst Intermediate to advanced English as a second language. Prepares new international teaching assistants for their responsibilities in the university. Provides intensive instruction in English language, pedagogy, and the culture of the American classroom. Department permission required. Offered as needed. 18-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 090 - English for Medical Purposes
High intermediate to advanced English as a second language. Develops participants' communication skills in medical context. Provides an overview of the American healthcare system and the dynamics of the different participants involved in the system. Placement testing is necessary. Offered as needed. 2.5-2.5-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ESL 091 - Spec Tops: English Lang \& Cult
Advanced English as a second language. Focuses on specific issues in English structure and usage. Includes issues of discourse, sociolinguistics, and culture. Placement testing is necessary. Offered as needed. 3-0-0
Credits:
College: Arts and Sciences
Department: English Language Center
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

## Environmental Policy Courses

ENVP 275 - Global Climate Change
This course provides a multidisciplinary introduction to the issue of global climate change. It focuses on the scientific evidence for climate change, its impacts on natural and human systems, actions that can be taken to mitigate or adapt to climate change and the political and cultural dynamics of this issue.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVP 325 - Introduction to Urban and Environmental Planning This course serves to introduce students to the field of urban and environmental planning. In doing so, this course seeks to expose students to the skill sets used by planners: including the planning process; citizens participation models; community needs assessment; data analysis and presentation; plan implementation and evaluation; and professional ethics.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ENVP 345 - Sociology of the Environment
Examines the social causes and solutions of environmental problems, including consumption, energy use and transportation, global trade and economy, environmental justice, environmentalists and anti-
environmentalist ideology, environmental social movements and sustainability.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVP 346 - Environmental Justice
Focuses on the uneven distribution of environmental hazards. Topics include the impact of pollutants on human health; poverty, race and exposure to environmental hazards; the impact of science and law on environmental justice; causes of environmental injustice; and the efforts and impact of the environmental justice movement.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ENVP 360 - Environmental Movements in America
Provides an introduction to the key collective actors and institutions involved in the creation of the U.S. environmental policies. Examines, through the use of historical and cultural perspective, the development of the various worldviews, organizations, and practices that define U.S. environmental politics.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ENVP 365 - Introduction to Environmental Policy Analysis
Provides an introduction to the development and implementation of U.S. environmental policy, including historical development, political process methods of analysis and creation of laws, regulations and budgets to realize policy objectives.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ENVP 399 - Independent Study in ENVR Studies
Provides a course of independent study in Environmental Studies.
Topics for study must be approved in advance of registration by the advisor and the instructor involved.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Repeat Status: Course can be repeated 99 time(s) for 999.00 credit(s)

ENVP 480-Special Topics
This course will explore current issues and interests in Environmental Studies. The topic will vary each term.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Repeat Status: Course can be repeated 99 time(s) for 999.00 credit(s)

## Environmental Science Courses

ENVS 169 - Environmental Science
This course provides an introduction to environmental problems and their causes, cultural changes, worldviews, ethics and environment. It covers such topics as science, matter and energy, ecosystems and how they work, air and air pollution, climate, global warming, and ozone loss, waste minerals and soil, solid, toxic and hazardous wastes, protecting food sources and energy resources.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVS 230-General Ecology
This course examines how organisms interact with the biological and physical world and bridges the natural sciences with the social sciences. Using evolutionary theory as its basis, this course will cover topics spanning multiple levels of organization within the science of ecology. Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 101 Minimum Grade: D or BIO 106 Minimum
Grade: D or BIO 109 Minimum Grade: D or BIO 123 Minimum Grade: D or BIO 126 Minimum Grade: D or BIO 141 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 260 - Environmental Science and Society
This course is a multidisciplinary introduction to the range of disciplines that make up the environmental sciences. The aim of this course is to provide an understanding of basic physical, ecological and social sciences that focus on the study on the natural environment and its interaction with human society.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ENVS 262 - Environmental Science and Society II
This course is a continuation of ENVS 260. This sequence provides a multidisciplinary introduction to the range of disciplines that make up the environmental sciences. The aim of this course is to provide an understanding of basic physical, ecological and social sciences that
focus on the study of the natural environment and its interaction with human society. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ENVS 270 - History of Life on Earth
The origin and evolution of life on earth are examined. Topics include the origins of life and the natural histories of plants and animals. The role of natural selection and contingency are emphasized. Lab exercises include hands-on fossil identification and may include fossil collecting trips.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVS 271 - Dinosaurs and Their World
An introduction to dinosaur paleontology, this course focuses on the scientific method as applied to dinosaur studies. Topics include dinosaur evolution, the history of dinosaur research, an overview of dinosaurs, and birds as living dinosaurs. This is suitable for all majors. Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVS 272 - Physical Geology
This course is an introduction to geology emphasizing the role of plate tectonics. Topics include formation of minerals, igneous, sedimentary, and metamorphic rocks, volcanoes, earthquakes, depositional environments, and geological hazards. Labs focus on mineral and rock identification, map skills, and 3D visualization.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

ENVS 275-Global Climate Change

This course provides a multidisciplinary introduction to the issue of global climate change. It focuses on the scientific evidence for climate change, its impact on natural and human systems, actions that can be taken to mitigate or adapt to climate change and the political and cultural dynamics of this issue.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVS 284 - Physiological and Population Ecology
Examines the role of physiological adaptation in the ecology of plants and animals and the principles of population biology as applied to
biological systems. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 123 Minimum Grade: D or BIO 126 Minimum
Grade: D or BIO 141 Minimum Grade: D or BIO 109 Minimum Grade: D Repeat Status: Not repeatable for credit

ENVS 285 - Population Ecology Lab
This laboratory course will introduce the basic concepts of populations ecology in context of their modern ramifications and will prepare students for advanced research in population ecology. Some or all prerequisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVR 284 Minimum Grade: D (May be taken concurrently) or ENVS 284 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

ENVS 286-Community and Ecosystem Ecology
Introduces the principles of community and ecosystem ecology.
Emphasizes the role of community structure and ecosystem
organization in the ecology of plants and animals.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 123 Minimum Grade: D or BIO 126 Minimum Grade: D or BIO 141 Minimum Grade: D or BIO 109 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 287-Community Ecology Lab
This laboratory course will introduce the basic concepts of community ecology in context of their modern ramifications and will prepare students for advanced research in community and ecosystem ecology. Some or all pre-requisites may be taken as either a pre-requisite or corequisite. Please see the department for more information.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVR 286 Minimum Grade: D (May be taken concurrently) or ENVS 286 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

ENVS 289-Global Warming, Biodiversity and Your Future Human induced global warming is changing the physical environment, ecological systems, and human systems around the world. We will explore causes, effects, and consequences of global warming using NASA satellite information and current scientific and semi-popular writings. Students will understand the implications of global climate change for their futures.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

ENVS 321 - Environmental Health
Covers evaluation of environmental hazards and design of environmental controls for the health and well-being of humans. Accompanying seminar on current problems.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 123 Minimum Grade: D or BIO 141 Minimum
Grade: D or BIO 126 Minimum Grade: D

Repeat Status: Not repeatable for credit

ENVS 322-Tropical Ecology
This is a course in the ecology of tropical rain forests and dry forests. Tropical ecology will explore the physical and biological factors that result in the formation of the forest, the effect of human impact, the effectiveness of management, and the future of these forests.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVS 284 Minimum Grade: D or ENVR 284 Minimum
Grade: D or ENVS 286 Minimum Grade: D or ENVR 286 Minimum
Grade: D
Repeat Status: Not repeatable for credit

ENVS 323-Tropical Field Studies
Ecology of tropical rain forests and dry forests. We will explore physical and biological factors that result in formation of these forests, effect of human impacts on these forests, effectiveness of management of these forests, and the future of these forests in Costa Rica in the field. Some or all pre-requisites may be taken as either a pre-requisite or corequisite. Please see the department for more information.

## Credits: 3.00

College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVS 322 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

ENVS 324-Microbial Ecology
Studies the relationships of microbes with plants, animals, and the environment, both biotic and abiotic components. Examines the key role of microbes in the functioning of ecosystems affecting decomposition, disease, nutrient cycling, and energy flow. Studies these processes and the role of microbes in the natural functions of ecosystems.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 221 Minimum Grade: D or ENVR 316 Minimum
Grade: D or ENVS 316 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 326 - Molecular Ecology
Through a combination of lecture, discussion, and computational exercises, students will learn how molecular tools have been used to study genetic variation. They will then learn how these studies have provided answers to previously unanswered questions in fields including ecology, evolution, behavior, conservation, and forensics. Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVS 284 Minimum Grade: D or ENVR 284 Minimum
Grade: D or BIO 218 Minimum Grade: D or ENVS 230 Minimum Grade:
D or ENVR 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 327 - Molecular Ecology Lab
Through a combination of laboratory and computational exercises, students will develop a toolkit for applied molecular studies of ecology and evolution. The course will focus on initiating or continuing a novel research project relating to one of several topics within the field of molecular ecology.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVS 284 Minimum Grade: D or ENVR 284 Minimum
Grade: D or BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 330-Aquatic Ecology
Studies the relationships between aquatic plants and animals and their environment. Introduces the study of the ecology of lakes, rivers, ponds, and streams.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites:
Repeat Status: Not repeatable for credit

ENVS 336-Terrestrial Ecology
Studies the relationships between terrestrial plants and animals and their environment. Introduces the study of the ecology of local ecosystems, such as the Poconos and the New Jersey Pine Barrens.

Credits: 5.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 126 Minimum Grade: D or ENVR 230 Minimum
Grade: D or ENVS 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 338 - Biodiversity and Conservation
Provides clear and detailed treatment of the problem of the ongoing reduction in biological diversity around the world. Develops through class discussions insight into the modern theories and practice of conservation.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites:
Repeat Status: Not repeatable for credit

ENVS 341 - Equatorial Guinea: Society \& Environment
A lecture and community outreach course based at the National University of Equatorial Guinea that combines instruction in mankind's relationship with the natural environment (human population, natural resources, environmental degradation, pollution, biodiversity loss and climate change) with environmental outreach activities specific to
Equatorial Guinea.
Credits: 4.50
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVS 342 - Equatorial Guinea: Natural Resource Economics A lecture course based a the National University of Equatorial Guinea that combines instruction in the economic implications of natural resources (renewable and non-renewable resources, efficient utilization, market performance, government controls, sustainability and discounting) with a university-wide guest lecture series addressing local issues.
Credits: 4.50
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Repeat Status: Not repeatable for credit

ENVS 343 - Equatorial Guinea: Field Methods
A lecture and field excursion course based at the University of Equatorial Guinea combining instruction in standard methods for studying rainforest communities (expedition planning; GPS and mapping, forest diversity and productivity; wildlife population monitoring) with multi-day field experiences in Bioko Island's remote protected areas.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

ENVS 344 - Equatorial Guinea: Field Research
An intensive research course that takes advantage of the unspoiled rainforest adjacent to the Moka Wildlife Center, a university-affiliated research station located in the highlands of Bioko Island, Equatorial Guinea (Central/West Africa). Opportunities exist for student research on topics including primates, antelope, birds, chameleons, butterflies and plants.
Credits: 6.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 1 time(s) for 6.00 credit(s)

ENVS 351 - Resource and Environmental Economics
Examines the microeconomic and quantitative aspects of markets for both renewable and exhaustible resources, and the interaction
between the energy and resource sectors of the economy and between the productive sectors of the economy and the natural environment, with evaluation of major public initiatives and issues in these areas. Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ECON 201 Minimum Grade: D and ECON 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 360 - Evolutionary Developmental Biology
Evolutionary Developmental Biology (Evo-Devo) compares developmental processes between organisms to determine how these mechanisms evolved in light of ancestral relationships. Topics include ¿your inner fish, ¿ how to ¿buildえ a dinosaur, and the reducibly simple
evolution of the eye. Also explored are developmental controls such as environmental factors and molecular mechanisms.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 217 Minimum Grade: D and BIO 218 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 364-Animal Behavior
The mechanisms, ecology and evolution of the activities of animals in relation to their natural environment. Topics include development and control (neural and hormonal) of behavior, adaptations for survival, feeding, and predator avoidance, strategies of habitat selection, communication, reproduction, and social behavior.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVS 230 Minimum Grade: D or BIO 123 Minimum
Grade: D or BIO 126 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 365 - Animal Behavior Lab
An observational study of the behavior of a captive group of social animals at the Philadelphia Zoo including species selection, background research, ethogram construction, 16 hours of quantified observation, analysis of data and written report.
Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVS 364 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

ENVS 370 - Practice of Environmental Economics
The focus of this course is on the real world implications of environmental resources exploitation and economic tools for dealing with them. Areas include air and water pollution, toxic wastes and mineral, water and forestry resource harvesting/extraction.
Credits: 3.00
College: Arts and Sciences
Department: Biology

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ECON 201 Minimum Grade: D and ECON 202 Minimum
Grade: D
Repeat Status: Not repeatable for credit

ENVS 374-Sedimentary Environments
Students in this course develop an understanding of sedimentary processes and the ability to interpret paleoenvironments based on sedimentological parameters. Topics include current flow, bedforms, siliciclastic and carbonate rocks, fluvial, coastal, and Aeolian
environments, taphonomy, and paleosols.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVR 272 Minimum Grade: D or ENVS 272 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 375 - Invertebrate Paleontology
This course focuses on the evolution of hard-bodied invertebrates from the Cambrian period to today. Topics include taxonomy, taphonomy, biostratigraphy, and paleoecology. Natural selection, functional morphology, extinction and adaption are emphasized. The lab focuses on hands-on fossil identification.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 217 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 382 - Field Botany: NJ Pine Barrens
This course focuses on plant identification skills that are necessary to conduct scientific botanical surveys. The vascular flora of the New Jersey Pine Barrens, including rare plant species, is emphasized with special reference to habitat and community analysis. Non-vascular species are examined but not emphasized.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):

## Junior

Pre-Junior
Senior
Pre-Requisites:
Repeat Status: Not repeatable for credit

ENVS 383 - Ecology of the NJ Pine Barrens
Course focuses on the ecology of the New Jersey Pine Barrens.
Students learn field methods, identify index species (flora and fauna),
perform community analyses, and use equipment for measuring abiotic
variables (soil and water). Field exercises focus on key aspects of the
regional ecology: fire, soil and water.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Pre-Junior
Senior
Pre-Requisites:
Repeat Status: Not repeatable for credit

ENVS 388 - Marine Field Methods
Course focus is on the ecology of local marine environments. Students learn marine field survey methods, identification of marine organisms,
habitat analyses, and use of equipment for measuring abiotic variables.
Students sample fish, plankton and invertebrate species aboard the
Drexel 25 foot Research Vessel Peter Kilham.
Credits: 4.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Pre-Junior
Senior
Pre-Requisites:
Repeat Status: Not repeatable for credit

ENVS 390 - Marine Ecology
This course studies major processes in the marine environment, especially relationships between organisms and the factors that
influence their abundance.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior

Pre-Requisites:
Repeat Status: Not repeatable for credit

ENVS 392 - Ichthyology and Herpetology
Many species of fishes, amphibians and reptiles face extirpation from their former ranges and some face total extinction within our lifetime. This course investigates major regional and global issues concerning viability of these organisms and addresses solutions using concepts of population ecology, community ecology, physiological ecology and conservation biology.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites:
Repeat Status: Not repeatable for credit

ENVS 401 - Chemistry of the Environment
Covers principles of physical and organic chemistry applicable to the study and evaluation of environmental conditions, especially the
pollution of air, water, and soil (including chemical changes and reactions in the environment).
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVE 302 Minimum Grade: D or CHEM 103 Minimum
Grade: D
Repeat Status: Not repeatable for credit

ENVS 405 - Atmospheric Chemistry
Introduces the principles of atmospheric physics and photochemical kinetics as a prelude to understanding the atmospheric chemical system. Examines the chemistry of the natural atmosphere to prepare for the understanding of how pollutants interact with natural species. Considers pollution of the stratosphere and the troposphere.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVR 401 Minimum Grade: D or ENVS 401 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 410 - Physiological Ecology
Examines mechanisms by which physiological factors affect and limit the distribution and abundance of animals, including physiological and behavioral thermoregulation, heat and cold tolerance, acclimation, metabolism, osmoregulation and dehydration tolerance, feeding strategies, digestion and feeding patterns, energy and water budges, toxins and optimality theory.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (ENVR 230 Minimum Grade: D or ENVS 230 Minimum
Grade: D ) and (ENVR 284 Minimum Grade: D or ENVS 284 Minimum
Grade: D or BIO 201 Minimum Grade: D )
Repeat Status: Not repeatable for credit

ENVS 412 - Biophysical Ecology
Covers energy balances and methods of heat transfer in organisms, including convection, conduction, radiation, evaporation, and
metabolism and steady-state and transient energy balances, including mass balances, water uptake and evaporation.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (MATH 239 Minimum Grade: D or MATH 123 Minimum
Grade: D ) and PHYS 153 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 413 - Advanced Population Ecology
One on of the greatest issues concerning life on Earth and human impact on the planet is whether species will survive or go extinct. This course explores how wild populations change over time and investigates the concepts and quantitative methods used to determine the viability of plant and animal populations.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVR 284 Minimum Grade: D or ENVS 284 Minimum
Grade: D
Repeat Status: Not repeatable for credit

Community ecology is the study of how populations of organisms interact with each other and the physical environment. Students will investigate the underlying principles that explain and predict interactions among populations of organisms, and how these principles can be used to conserve and manage wild animal and plant communities.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVR 286 Minimum Grade: D or ENVS 286 Minimum
Grade: D
Repeat Status: Not repeatable for credit

ENVS 436 - Principles of Toxicology I
This course reviews general human physiology and the acute and chronic effects of toxicants upon physiological mechanism. Basic principles of dose-response relationships, target organ toxicity and exposure characterization are incorporated.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 437 - Principles of Toxicology II
This course expands upon knowledge gained in ENVS 436 Principles of Toxicology I by focusing on the absorption, distribution, biotransformation, and excretion of toxic substances. Current advances in the studies of carcinogenesis and mutagenesis are also discussed as well as toxicological research methods, animal and plant toxins, food toxicology and pesticides.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENVR 436 Minimum Grade: D or ENVS 436 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 441 - Issues in Global Change I: Seminar
Discusses and evaluates topics such as records of climate change, atmospheric chemistry and global warming, the greenhouse effect,
ozone depletion, acid rain, decreased biodiversity, desertification, deforestation, and sea-level rise. This is a writing intensive course. Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

ENVS 442 - Issues in Global Change II: Research
Requires students to focus on a particular change topic or issue in order to analyze it, prepare a research report, and present a final seminar. Credits: 2.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Pre-Requisites: ENVS 441 Minimum Grade: D or ENVR 441 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

ENVS 476 - Paleobotany
Covers the evolution of photosynthetic organism from algae to
flowering plant. Topics include origins of plants, invasion of the land, evolution of ferns, gymnosperms, and angiosperms. Emphasis on natural selection, cladistics, functional morphology, adaptive radiation, mass extinction, plant taphonomy, and paleoecology.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: BIO 217 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 477 - Vertebrate Paleontology
This course focuses on the evolution of vertebrates from the Cambrian Period to today. Topics include cartilaginous and bony fishes, amphibians, turtles, crocodiles, pterosaurs, birds, and mammals. Natural selection, cladistics, functional morphology, adaptation and extinction are emphasized.
Credits: 3.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Pre-Requisites: BIO 217 Minimum Grade: D
Repeat Status: Not repeatable for credit

ENVS 480 - Special Topics
Special topics offered in environmental science. Topics include recent
multidisciplinary areas of environmental concern.
Credits: 12.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 999.00 credit(s)

ENVS 497 - Research
Provides guided research in ecology, earth science and environmental science.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 999.00 credit(s)

ENVS 498 - Independent Study
Provides independent study in environmental science.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Biology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Repeat Status: Course can be repeated 99 time(s) for 999.00 credit(s)

## French Courses

FREN 101 - French I
Introductory French. Includes listening, speaking, reading, and writing.
Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

FREN 102 - French II
Continues FREN 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 103 - French III
Continues FREN 102. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 201 - French IV
Intermediate French. Includes grammar review, listening, speaking, and reading, with individual audiolingual practice. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 202 - French V
Continues FREN 201. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 203 - French VI: Convers \& Comp
Provides intensive practice in comprehension and written and oral communication. Emphasizes development of writing skills and increased oral competence in everyday situations. Offered all terms. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Pre-Requisites: FREN 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 311 - Intro French Stylistics
Provides advanced practice in comprehension and written and oral communication, based primarily on periodicals and contemporary media. Offered every term. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 312 - French Stylistics
Continues FREN 311. Provides extensive study of the techniques of translation and communication. Offered all terms. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 313-Advanced French Stylistics
Continues FREN 312. Provides advanced training in oral and written communication in French. Particularly recommended for students who have pre-proficiency status, French minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

## FREN 331 - Intro French Lit Studies

Advanced French. Reading, writing, and extensive conversational practice, based on masterpieces of French literature.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 332 - Studies in French Literature
Includes reading and oral and written analysis of representative texts in French literature, including familiarization with the historical and
cultural contexts. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 333 - Advanced French Literature
Continues FREN 332. Provides advanced study of French literature.
Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 351 - Intro Bus \& Prof French
Provides intensive oral practice and written work in business, professional, and commercial French. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 352 - Business \& Prof French
Advanced Business and Professional French. Advanced practice in oral
and written French for business and the professions. Based on
advanced texts, periodicals, and technical journals.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

FREN 371 - Spec St French Civ \& Cult
Presents an integrated approach in French to the civilization, culture, history, and literature specific to the areas in which the language is spoken, with emphasis on the development and evaluation of cultural values. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

FREN 399 - Adv Independ Study French
Provides supervised study of special subjects in French language and
literature. Offered all terms. This is a writing intensive course.
Credits: 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

FREN 411 - Spec St Adv French Stylistics
Continues FREN 313. Particularly recommended for students who have proficiency status, French minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

FREN 431 - Spec St Adv French Lit
Continues FREN 333. Particularly recommended for students who have proficiency status, French minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.

Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

Continues FREN 353, with emphasis on the structure and protocols of
the European Union. Particularly recommended for students who have
proficiency status, French minors, and students interested in graduate
study and/or international careers. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

FREN 471 - Sp St French Civilization
Presents an integrated approach, at the advanced level, to the
civilization, culture, history, and literature of a given period specific to
the areas in which French is spoken, with emphasis on the
development and evaluation of cultural values. Offered as needed. This
is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: FREN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

FREN 480 - French Minor Thesis Course
Independent research study on a topic selected by the student. Independent study is supervised by a faculty member and guided by a plan of study. At the end of the course, the student is required to produce a paper and oral defense on the topic of his paper.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

FREN 499-Special Topics in French
Recommended for French minors and for students with proficiency
status. Offered all terms. This is a writing intensive course.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

## German Courses

GER 101 - German I
Introductory German. Includes listening, reading, writing, and speaking. Offered all terms.

Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

GER 102 - German II
Continues GER 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 103-German III
Continues GER 102. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 201 - German IV
Intermediate German. Includes grammar review, listening, speaking, and reading. Recommended for students who wish to attain oral competence. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Pre-Requisites: GER 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 202-German V
Continues GER 201. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 203 - German VI: Convers \& Comp
Provides intensive practice in comprehension and written and oral
communication. Emphasizes development of writing skills and increased oral competence in everyday situations. Offered all terms. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 311 - Intro German Stylistics
Provides advanced practice in comprehension and written and oral communication, based primarily on periodicals and contemporary
media. Offered as needed. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 312 - German Stylistics
Continues GER 311. Provides extensive study of the techniques of translation and communication. Offered as needed. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 313 - Advanced German Stylistics
Continues GER 312. Provides advanced training in oral and written communication in German. Particularly recommended for students who have pre-proficiency status, German minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Course can be repeated 0 time(s)

GER 331 - Intro German Lit Studies
Advanced German. Reading, writing, and extensive conversational practice, based on masterpieces of German literature.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 332 - Studies in German Literature
Includes reading and oral and written analysis of representative texts in German literature, including familiarization with the historical and cultural contexts. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 333 - Advanced German Literature
Continues GER 332. Provides advanced study of German literature. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 351 - Intro Bus \& Prof German

Provides intensive oral practice and written work in business, professional, and commercial German. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 352 - Business \& Prof German
Advanced business and professional German. Advanced practice in oral and written German for business and the professions. Based on
advanced texts, periodicals, and technical journals.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 353 - Adv Business \& Prof German
Provides advanced study in business and professional terminology, with emphasis on the structure and protocols of the business world. Offered as needed.
Credits: . 50 to 20.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

GER 371 - Spec St German Civ \& Cult
Presents an integrated approach in German to the civilization, culture, history, and literature specific to the areas in which the language is spoken, with emphasis on the development and evaluation of cultural values. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

GER 399 - Adv Independ Study German
Provides supervised study of special subjects in German language and
literature. Offered all terms. This is a writing intensive course.
Credits: . 50 to 12.00

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

GER 411 - Spec St Adv German Stylistics
Continues GER 313. Particularly recommended for students who have proficiency status, German minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

GER 431 - Spec St Adv German Lit
Continues GER 333. Particularly recommended for students who have proficiency status, German minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

GER 451 - Sp St Adv Bus/Prof German
Continues GER 353, with emphasis on the structure and protocols of the European Union. Particularly recommended for students who have proficiency status, German minors, and students interested in graduate study and/or international careers. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s): Freshman
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

GER 471-Sp St German Civilization
Presents an integrated approach, at the advanced level, to the civilization, culture, history, and literature of a given period specific to the areas in which German is spoken, with emphasis on the development and evaluation of cultural values. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: GER 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

GER 480-German Minor Thesis Course
Independent research study on a topic selected by the student.
Independent study is supervised by a faculty member and guided by a
plan of study. At the end of the course, the student is required to
produce a paper and oral defense on the topic of his paper.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

GER 499 - Special Topics in German
Recommended for German minors and for students with proficiency status. Offered all terms. This is a writing intensive course.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

## Greek Courses

GREC 101 - Modern Elementary Greek I
The goal of this course is to provide a thorough foundation in Greek language with emphasis on communication. Small class size provides intensive practice in speaking, writing and listening comprehension. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

GREC 102 - Modern Elementary Greek II
The goal of this course is to provide a thorough foundation in Greek language with emphasis on communication. Small class size provides intensive practice in speaking, writing and listening comprehension.
Builds on Greek 101.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GREC 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

GREC 103 - Modern Elementary Greek III
The goal of this course is to provide a thorough foundation in Greek language with emphasis on communication. Small class size provides intensive practice in speaking, writing and listening comprehension.
Builds on Greek 102.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GREC 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

GREC 201 - Intermediate Modern Greek I
Emphasizes complex grammatical and syntactical phenomena of the Modem Greek language through oral communication and texts. Students examine idiomatic nuances and special features of the language. Skills in speech, reading comprehension and writing are further developed at this level. This course counts toward the completion of a Minor in Greek Studies.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: GREC 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

GREC 212 - Introduction to Greek Folklore Greek folklore developed when the Greek nation was born. Using folklore, Greeks try to preserve their traditions and define their cultural identity. The class explores majors folklore topics and interpretive techniques. It provides examples and analyses of particular folklore forms, events and expressions of the Greek culture.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Repeat Status: Not repeatable for credit

GREC 225 - Introduction to Greek Music \& Dance
This course studies Greek music and dance historically by a) exploring performance events and b) focusing on certain music and dance genres and music groups/musicians. How does music and dance help Greeks express who they are? Formal music training and the ability to read Western staff notation is not required.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

## GREC 380-Special Topics in Greek Studies

Provides topics that cover various subjects in Greek time and space, such as geography, history, economy, civilization, culture and the arts. Credits: 1.00 to 4.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

GREC 399 - Independent Study in Greek
Provides supervised study that allows students to explore topics of their own choosing individually.
Credits: 1.00 to 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

## Hebrew Courses

HBRW 101-Introduction to Hebrew I
The goal of this course is to provide a thorough foundation in the Hebrew language. Small class size provides intensive practice in speaking, writing and listening comprehension.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

The goal of this course is to provide a thorough foundation in the Hebrew language. Small class size provides intensive practice in speaking, writing and listening comprehension. Continues HBRW 101. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HBRW 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

HBRW 103-Introduction to Hebrew III
The goal of this course is to provide a thorough foundation in the
Hebrew language. Small class size provides intensive practice in speaking, writing and listening comprehension. Continues HBRW 102.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HBRW 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

## History Courses

HIST 140 - Europe \& the Modern World I
Provides an introduction to the 18th and 19th centuries, including the
Age of Enlightenment, the American Revolution, the French Revolution and Napoleonic era, transatlantic industrialization, liberalism and nationalism, the revolutions of 1848, the American Civil War, and the unifications of Italy and Germany.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 141 - Europe \& the Modern World II
Examines imperialism; the rise of the United States and Japan as world powers; the spread of industrialization, democracy, and socialism; world wars; communism and fascism; and the rise of the non-West.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: HIST 140 Minimum Grade: D
Repeat Status: Not repeatable for credit

Examines development of civilizations from antiquity to the 12th century. Views patterns of historical change through key themes and interpretive debates, including political structures; land tenure and social systems; commercial and trade relations; the development of cities, science, and technology; and religions.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 162 - Themes World Civilization II
Provides an analysis of civilizations from the 12th century to 1815 viewed through key themes and interpretive debates, including the development of the nation-state, interaction between civilizations, the concept of cultural unity, religious upheaval, disease and science, the relationship between culture and politics, and the nature of revolutions.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 163 - Themes World Civilization III
Explores the emergence of modern civilization through key themes and interpretive debates, including industrialization, imperialism, science and technology, ideological debate, the nature of modern warfare, the relationship between nationalism and the state, and the emergence of state-sponsored racism.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 201 - US History to 1815
Examines the political, economic, and social forces that shaped America in the era of its founding.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 202 - US History, 1815-1900
Examines the emergence of modern America to the close of the Spanish-American War.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 203 - US History since 1900
Examines America as economic giant, world political power, and scene of social change.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 209 - US \& Central America
Covers the history of relations between the United States and the nations of Central America.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 212 - Themes in African-American History
Explores the major issues in the development of Afro-American history through the 19th century, beginning with an overview of West and Central African societies in the 15th and 16th centuries and including the family, religion, forms of resistance, aesthetics, and patterns of white-black relationships.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 214 - US Civil Rights Movement
Examines the origins, objectives, successes and failures of the Civil Rights movement in the United States between 1954 and 1972.
Credits: 3.00

College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 215 - American Slavery
This course if a rigorous examination of slavery and its representation in the United States. Using primary and secondary resources, art,
literature and film clips; the relationship between history and memory and the impact of the social, political, and gendered imagination are
investigated.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

HIST 216 - Freedom in America
This course examines African-American history, 1865 to the present, and explores the impact of gender and sexuality in history. Specifically, comparing primary and secondary sources in order to critique how history itself is manufactured and to investigate the role that sexuality and gender play on that process.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

HIST 218 - Race and Film in US History
This course examines the interplay between history, film and African
American? pursuit of social justice and equality. Specifically, the use of
films as cultural artifacts or prisms through which better understanding of the dynamics of race and racial inscription in America.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

HIST 220 - History of American Business
Examines the development of business in the United States from the 1870s to the present. Emphasizes the evolving structure of business enterprise, business/government relations, business in an international context, and business and American culture.
Credits: 3.00
College: Arts and Sciences

Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 222 - Hist Work \& Workers in America
Examines the changing nature of work and the lives of American workers, from the origins of wage labor in the 19th century to the transformation of the workplace in the 20th.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 223 - Women and Work in America
Examines the historical roots of women's work in the U.S. from the Colonial period to the present, including women and unions, occupational segregation, race and ethnicity, industrialization, depression, war, and the rise of a consumer economy.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 224 - Women in American History
Covers the history of American women from the 1890s to the present, with emphasis on women's rights, women and technology, women's role in war, and women in the labor force in the 20th century.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 230 - US Military Hist I before 1900
Covers the origins and development of military institutions, traditions, and practices in the United States from the Revolution to the Spanish-

American War, and the operational, intellectual, diplomatic, and social aspects of military history.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 231 - US Military Hist II since1900
Examines the emergence of the United States as a major military
power, including military/civil relationships; the impact of technological change; and the world, Korean, and Vietnam wars.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 232 - The American Revolution
Investigates why Americans rebelled against Great Britain, how they gained their independence against staggering odds, and the new problems created by independence. Looks at the Revolution as a model of the first successful struggle of colonial subjects against their
European overlords.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 234 - US Civil War
Examines the causes, course, and results of the American Civil War.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 236 - World War II
Provides an in-depth study of World War II, with emphasis on Europe but also including the war in North Africa, Asia, and the Pacific.
Discusses major military events in a broad political framework, with lectures on economic, social, and scientific developments.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 237 - Topics in the Cold War
Investigates various aspects of the History of the Cold War from 1947
to 1991. Topics will vary from U.S. domestic politics, the politics of the nuclear age, to other foreign policy aspects of the Cold War in its different stages.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

HIST 238 - The Vietnam War
Covers Southeast Asia before the French, the French imperium, the
First Indochina War, entry of the United States, the Second Indochina
War, and withdrawal of the United States.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 235 - The Great War, 1914-1918
Examines the global causes, conduct, and consequences of World War
I, which fundamentally altered our century's political, social, economic, and cultural institutions.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics

College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 242 - Modern Italy
Covers Italy from Napoleon to the present, including risorgimento, unification, trasformismo, fascism, and the post -World War II period.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 243 - Germany \& World of Hitler
Examines German history since 1815. Emphasizes the roots of national socialism, the world wars, and Hitler the man. Ends with the fall of East Germany, the reunification of 1990, and recent trends.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 244-20th- century Russia \& USSR
Examines the last years of imperial Russia, showing the background to
the revolutions of 1917, followed by a study of the institutions and
personalities of the USSR.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 245 - England to Elizabeth, to 1558
A survey of the formation of the English people and their growth to national independence and maturity.
Credits: 3.00
College: Arts and Sciences

Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 246 - England Eliz/Wtrloo,1558-1815
Covers the crisis of the English constitution, the beginnings of modern society and the Industrial Revolution, and the formation of the British Empire.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 247 - Modern England, 1815 - present
Examines Victorian England as the first industrial society, the course of empire through two world wars, and the challenge of the present.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 249 - Modern Jewish History
Explores the social, cultural, political and religious forces that have shaped world Jewry from the 18th to the 20th centuries.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 250 - Euro Rev Ideology, 1815-1914
Provides a comprehensive analysis of the development and influence of the principal revolutionary movements and ideologies that challenged the European status quo from 1815 to 1914.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Repeat Status: Not repeatable for credit

HIST 251 - Fascism
Provides a chronological/topical study of fascist movements and
regimes in Europe between 1919 and 1945, with emphasis on Italian
Fascism and German Nazism.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 252 - Europe between Wars, 1919-1939
Examines Europe in the 1920s and 1930s, with emphasis on totalitarianism and the causes of World War II. Analyzes the search for peace and stability following World War I; totalitarianism in Italy,
Germany, and the Soviet Union; the decline of Great Britain and France and their appeasement policies; and Nazi fascist aggression and the crises leading to World War II.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 253 - Jewish Life and Culture in Middle Ages
This course in an introductory survey of the history of the Jewish
people, their civilization, religion, and contacts with other cultures in medieval times. Topics will include the rise of Christianity and Islam,
the Talmud, Jewish mysticism, and the growth of Ashkenazic and
Sephardic Jewry.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 254 - Russian History Before 1900
Survey of Russian History from its origins to the end of the Tsarist period. This course covers both Russia's role in Western European history, and its interactions with Eastern Eurasian civilizations. Fulfills a non-Western distribution requirement.
Credits: 3.00
College: Arts and Sciences

Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 258 - Hist of Europe,19th Century
Analysis of the forces and events that define European civilization in
the 19th century, from the Congress of Vienna to the origins of WW1.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 259 - Hist of Europe, 20th Century
Analysis of the forces and events that define European civilization in the 20th century, from the outbreak of WW1 to the present.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 263 - The World and China
Examines China from its origins to the present day, with emphasis on social, political, and economic institutions. Describes the influences Chinese civilization has had on other societies of the world and the influences other societies have had on China.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 264 - East Asia in Modern Times
Deals primarily with China and Japan, including a description of their traditional societies and the changes they have undergone during the 20th century.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman

Repeat Status: Not repeatable for credit

HIST 267 - Twentieth Century World I
Examines movements, institutions, and personalities in the major
regions of the world, from 1890 through 1939.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

HIST 268-Twentieth Century World II
Studies events in the major regions of the world since 1945 in historical perspective.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

HIST 270 - Intro Latin American History
Takes a thematic approach to Latin American history, examining modernization and tradition, sex roles and family honor, love and lust, dictatorship and human rights abuses, poverty and crime, terrorism and revolutionary violence. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 271 - History of Mexico
Surveys themes in Mexican history from the ancient civilizations of the Mayans and Aztecs to the present, including Spanish conquest, Hapsburg and Bourbon colonial systems, independence wars, social conflict and political protest, the Reform, Maximilian's empire, economic expansion, the revolution of 1910, and revolutionary Mexico. Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 272 - Ancient \& Colonial Mexico
Surveys Mexico from the ancient Aztecs; their conquest by the Spanish; three hundred years of colonialism under the Habsburg and Bourban dynasties to the 1810s. Covers role of race, class, gender and family (marriage and food).
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 273 - Modern Mexico
Surveys Mexico from the Wars of Independence (1810's) to the present. Pays attention to changing values evident in rituals, celebrations and food.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 274 - Conquest of Mexico
Students will analyze interpretations of ¿the conquesṫ and compare the roles of technology and culture. They will also examine carefully the variety of primary courses (including the letters written by Cortes, recollections by other conquistadors, and records of the Aztecs) that historians have used to support their contrasting conclusions.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 276 - The History of Philadelphia
This course surveys the history of Philadelphia through pre-colonial, colonial, and industrial eras to the present day. Philadelphia is investigated as an economic, social, cultural, and political center. Students read primary and secondary sources, and conduct original research into Philadelphia's history. Lectures and discussions are complemented by on-site historical investigations.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Repeat Status: Not repeatable for credit

Covers the development of the scientific ideas of Newton, with emphasis on the nature of science and scientific method. Provides an opportunity for students to pursue their own interests.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

HIST 281 - History of Science II
Covers scientific ideas from Newton to the early 20th century, including cultural influences on science and relationships between science and technology. Centers on student interests.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

Examines how, when, and why science and technology have become masculinized since the 12th century, producing a world without women.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 290 - Technology and the World Community
Examines the effect on international relations of rapid technological change in the modern era, and technology as a tool of modernization, political integration, and national security among advanced and developing states.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 292 - Technology in American Life
Examines the role of technology as means of production, social force, and ideology in modern U.S. history.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 296 - Research Methods in History
Designed for history majors, this course introduces students to the fundamentals of historical research. The course focuses on methods, particularly in teaching students to locate and analyze evidence.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

HIST 298-Special Studies in History
Provides supervised individual study of subjects in history. May be repeated for credit.
Credits: 12.00

College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

HIST 299 - Hist Background Current Issues
Examines a current policy issue in its historical context. See departmental brochure for topic scheduled for a particular term. May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

HIST 301 - The Study of History
Introduces the discipline of history and historical research. Examines
philosophies of history, great historical debates, and the nature of historical evidence.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HIST 296 Minimum Grade: D
Repeat Status: Not repeatable for credit

HIST 310 - Women, Crime, \& History
This class will examine gender, race and crime in US history.
Specifically, we will explore the experience of female criminals from the colonial period to the present. We will conduct primary research into this subject at the Philadelphia City Archive (PCA), located at 3101
Market Street. Students will be responsible for a final research paper based on their research findings.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HIST 332 - Junior Seminar

A research seminar directed by a historian. Requires students to write an extended paper on a topic selected in consultation with the instructor. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HIST 490-Senior Seminar I
Requires an in-depth research project supervised by a historian. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HIST 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

HIST 491 - Senior Seminar II
Requires completion of the project begun in HIST 490. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HIST 490 Minimum Grade: D
Repeat Status: Not repeatable for credit

HIST 492 - Senior Seminar
The senior capstone course in history. Students complete an in-depth research project supervised by an historian.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following Major(s):
History
Must have the following Classification(s):
Senior
Pre-Requisites: HIST 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

## Humanities, General Courses

HUM 006 - Oral Comm Sk/Non-Native Spkrs
Designed to help international members of the Drexel community improve their listening comprehension and oral communication skills in English. Provides participants with opportunities to make presentations and receive constructive feedback, with particular attention to grammar, pronunciation, and fluency problems. Especially
recommended for international teaching assistants.
Credits:
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

HUM 106 - Humanities \& Commun I
Covers reading of fictive and expository works and writing of essays of response and critical analysis. Introduces technical writing. Develops an awareness of audience and begins group work for collaborative projects, with a focus on creativity in the liberal arts and in engineering. Requires students to keep journals as tools for reflection.

## Credits: 3.00

College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

HUM 107 - Humanities \& Commun II
Covers the research process. Continues work with critical analysis
begun in hum 106. Requires students to apply research methodology as they write a critical review and a chemistry synthesis paper, and
develop group proposals for their design projects. Also requires students to continue the study of literature begun in hum 106 and continue keeping journals.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

HUM 108 - Humanities \& Commun III
Requires students to write a literary analysis of a play in production locally and discuss visual arts. Includes written and oral presentations of students' final engineering design projects. Coordinates readings in non-fiction with the course science component. Requires students to write a synthesis paper for biology and continue using journals as a means for reflection.

Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

HUM 159-Peer Tutoring Workshop
A course in which students learn to do writing-intensive tutoring using theory and practice. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

HUM 211 - Studies in the Humanities I
Introduces the subject matter, methodologies, and critical issues of the humanities.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

HUM 305 - Metaphorical Thinking
Interdisciplinary study of the process of metaphorical thinking
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

HUM 315 - Perspectives in Medical Humanities

This course introduces a multidisciplinary approach to health related topics rooted in literary, philosophical, social, scientific/technological, and psychological perspectives and methodologies. Discussion format and student participation in choosing readings enhance a sense of community among the participants.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program(s):
Certificate AS-HSS
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

## International Area Studies Courses

IAS 190-Global Research Methods
Introduction to research and writing in International Area Studies. It covers quantitative, qualitative, and mixed approaches to IAS research. Students learn to use international studies research databases and the websites of international organization. Drawing on the content areas from the four IAS concentrations, students construct a research design for a topic of their choice.
Credits: 3.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
International Area Studies
Repeat Status: Not repeatable for credit

IAS 320 - Building Global Bridges
This course is designed to develop an understanding of international development. Students learn about the practical challenges of development work from local needs to grant writing, fund-raising, implementation strategies, and project evaluation. They study the theoretical and practical frameworks for poverty reduction and democracy development as well as the agencies involved.
Credits: 3.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
Must be enrolled in one of the following Program Level(s):
Graduate Quarter
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

IAS 359 - Culture and Values
This course provides an in-depth comparative study of the historical, social and cultural imperatives of major world civilizations, with
particular emphasis on the philosophical and cultural diversity of today's global society. It is recommended for all students interested in careers in the international field. It is required for the B.A. and B.S. degrees in International Area Studies and for the IAS minor.
Credits: 3.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

IAS 360 - Spec Topics World Civilization
This is an interdisciplinary seminar designed to give students an understanding of the modern cultural attitudes, ethical values, and sociopolitical norms of major civilizations in a given geographical area and their relationship to one another. May be repeated for credit with a change in course topic. Required for the B.A. degree in International Area Studies.
Credits: 3.00 to 12.00
College: Arts and Sciences
Department: Int'l Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

IAS 385 - Rum, Rice and Revolution: Caribbean History Course provides a broad, interdisciplinary and socio-historical introduction to the Caribbean. Several themes are covered including empire and the making of the Caribbean; slavery and emancipation; labor formation and race; revolution and resistance; gender oppression and women's experiences; and cultural expressions.
Credits: 3.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

IAS 390-Special Topics in International Area Studies
This course explores critical issues and debates in International Area Studies. Topics vary each term. May be repeated three times for credit. Credits: 1.00 to 6.00
College: Arts and Sciences
Department: Int'l Studies \& Modern Langs Restrictions:
Must be enrolled in one of the following Program Level(s): Undergraduate Quarter
May not have the following Classification(s):

Freshman
Repeat Status: Course can be repeated 8 time(s) for 30.00 credit(s)

IAS 399 - Independent Study-IAS
This course provides independent study in a topic related to International Area Studies.
Credits: 1.00 to 12.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 98 time(s)

International Studies Courses

IST 398 - Intern Rsch Proj/Stud Abr
Credits: . 50 to 20.00
College: Arts and Sciences
Department: COAS Admin (Humanities) Hist
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

## International Studies Abroad Courses

AS-A 351 - Study Abroad Literature/Civics/Arts
Provides opportunities in literature, business, history, political science, art, psychology, and sociology. Courses offered through Educational Programs Abroad (EPA) in Berlin, Madrid, Paris, Brussels, and London. Credits: 12.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

AS-A 352-Study Abroad-Psychology/Sociology
Credits: 20.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

AS-A 353 - Study Abroad-History/Political Science
Credits: 20.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

AS-A 354 - Study Abroad-European Union Credits: 12.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

AS-A 398 - Independent Research Project - Study Abroad
Credits: 12.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

AS-A 399-Study Abroad - Independent Study Independent study in a term in which the student studies abroad.
Credits: 12.00
College: Arts and Sciences
Department: Int'I Studies \& Modern Langs
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

Italian Courses

ITAL 101 - Italian I
Introductory Italian. Includes listening, speaking, reading, and writing.
Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Repeat Status: Not repeatable for credit

ITAL 102 - Italian II
Continues ITAL 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 103-Italian III
Continues ITAL 102. Offered all terms
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

TAL 201 - Italian IV
Intermediate Italian. Includes grammar review, listening, speaking, and reading. Recommended for students who wish to attain oral competence based on standard usage. Offered all terms
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 202 - Italian V
Continues ITAL 201. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 203 - Italian VI: Convrs \& Comp
Provides intensive practice in comprehension and written and oral communication. Emphasizes development of writing skills and increased oral competence in everyday situations. Offered all terms.

Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 311 - Intro Italian Stylistics
Provides advanced practice in comprehension and written and oral communication, based primarily on periodicals and contemporary
media. Offered as needed. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 312 - Italian Stylistics
Continues ITAL 311. Provides extensive study of the techniques of translation and communication. Offered as needed. This is a writing intensive course.

Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 313 - Advanced Italian Stylistics
Continues ITAL 312. Provides advanced training in oral and written communication in Italian. Particularly recommended for students who have pre-proficiency status, Italian minors and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Course can be repeated 0 time(s)

ITAL 331 - Intro Italian Lit Studies
Advanced Italian. Reading, writing, and extensive conversational practice, based on masterpieces of Italian literature. Credits: 3.00
College: Arts and Sciences

Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 333 - Adv Italian Literature
Continues ITAL 332. Provides advanced study of Italian literature.
Offered as needed.
Credits: 6.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Course can be repeated 98 time(s)

ITAL 351 - Intro Bus \& Prof Italian
Provides intensive oral practice and written work in business, professional, and commercial Italian. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

ITAL 352 - Business \& Prof Italian
Advanced business and professional Italian. Advanced practice in oral and written Italian for business and the professions. Based on advanced texts, periodicals, and technical journals.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

## ITAL 371 - Spec St Ital Civ \& Cult

Presents an integrated approach in Italian to the civilization, culture, history, and literature specific to the areas in which the language is spoken, with emphasis on the development and evaluation of cultural values. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

ITAL 399 - Adv Ind Study Italian
Provides supervised study of special subjects in Italian language and
literature. Offered all terms. This is a writing intensive course.
Credits: 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: ITAL 203 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

ITAL 411 - Spec St Adv Ital Stylistics
Continues ITAL 313. Particularly recommended for students who have proficiency status, Italian minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

ITAL 431 - Spec St Adv Italian Lit
Continues ITAL 333. Particularly recommended for students who have proficiency status, Italian minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

ITAL 451 - Sp St Adv Bus/Prof Ital
Continues ITAL 353, with emphasis on the structure and protocols of the European Union. Particularly recommended for students who have proficiency status, Italian minors, and students interested in graduate study and/or international careers. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):

## Continuing Education

May not have the following Classification(s):
Freshman
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

ITAL 471 - Sp St Ital Civilization
Presents an integrated approach, at the advanced level, to the civilization, culture, history, and literature of a given period specific to the areas in which Italian is spoken, with emphasis on the development and evaluation of cultural values. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ITAL 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

ITAL 480 - Italian Minor Thesis Course
Independent research study on a topic selected by the student.
Independent study is supervised by a faculty member and guided by a
plan of study. At the end of the course, the student is required to
produce a paper and oral defense on the topic of his paper.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

## ITAL 499 - Special Topics in Italian

Recommended for Italian minors and for students with proficiency
status. Offered all terms. This is a writing intensive course.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

## Japanese Courses

JAPN 101 - Japanese I
Introductory Japanese. Includes listening and speaking, with individual audiolingual practice. Offered all terms.
Credits: 4.00

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

JAPN 102 - Japanese II
Continues JAPN 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 103 - Japanese III
Continues JAPN 102. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 104 - Japanese Writing I
This course focuses on reading and writing in the Japanese language.
The course introduces the basic elements of the Japanese writing systems, which include Katakana, Hiragana and Kanji.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: JAPN 101 Minimum Grade: D and JAPN 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 105 - Japanese Writing II
This course focuses on reading and writing in the Japanese language.
The course builds on lessons from Japanese Writing I.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 104 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 201 -Japanese IV
Intermediate Japanese. Includes listening, speaking, reading, and writing, with individual audiolingual practice. Offered all terms. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 202 - Japanese V
Continues JAPN 201. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 203 - Japanese VI: Convr \& Comp
Continues JAPN 202. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 204 - Japanese Writing III
This course focuses on reading and writing in the Japanese language.
The course builds on lessons from Japanese Writing I and II.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 105 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 301 - Japanese VII
Advanced Japanese. Provides reading, writing, and extensive conversational practice. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Pre-Requisites: JAPN 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 302 - Japanese VIII
Provides advanced practice in translation, comprehension, and written and oral communication. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 303-Japanese IX
Continues JAPN 302. Offered as needed and with sufficient enrollment.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 302 Minimum Grade: D
Repeat Status: Not repeatable for credit

JAPN 399 - Adv Independ St Japanese
Provides supervised study of special subjects in Japanese language and literature. Offered as needed.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

JAPN 411 - Intro Japanese Stylistics
Fourth year of Japanese. Provides advanced practice in comprehension and written and oral communication. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

JAPN 451-Intro Bus \& Prof Japanese

Fourth year of Japanese. Provides intensive oral practice and written work in business, professional, and commercial Japanese. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: JAPN 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

JAPN 480 - Japanese Minor Thesis Course
Independent research study on a topic selected by the student.
Independent study is supervised by a faculty member and guided by a
plan of study. At the end of the course, the student is required to
produce a paper and oral defense on the topic of his paper.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

Judaic Studies Courses

JUDA 201-Jewish Literature \& Civilization
This course explores the origins of the Jewish people and their core narratives and beliefs that have become the foundations of Jewish civilization and religion, introducing the first five books of the Torah, the Jewish Bible and analyzing its influence. Major events of the Jewish lifecycle and calendar are examined.
Credits: 3.00
College: Arts and Sciences
Department: Judaic Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

JUDA 202 - Jewish Life \& Culture in Middle Ages
This course is an introductory survey of the history of the Jewish people, their civilization, religion and contacts with other cultures in medieval times. Topics will include the rise of Christianity and Islam, the Talmud, Jewish mysticism and the growth of Ashkenazic and Sephardic Jewry
Credits: 3.00
College: Arts and Sciences
Department: Judaic Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

JUDA 203 - Modern Jewish History
This course is an exploration of the social, cultural, political and religious forces that have shaped Jewry the world over from the 18th to the 20th centuries. Topics will include Emancipation and
Enlightenment, modern religious movements, socialism, Hebrew and Yiddish literature, the Holocaust, Zionism and the state of Israel.
Credits: 3.00
College: Arts and Sciences
Department: Judaic Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

## Korean Courses

KOR 101-Korean I
Introductory Korean. Includes listening, speaking and writing, with individual audio-video practice.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

KOR 102 - Korean II
Introductory Korean. Includes listening, speaking and writing, with individual audio-video practice. Builds on Korean 101
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

KOR 103 - Korean III
Introductory Korean. Includes listening, speaking and writing, with individual audio-video practice. Builds on Korean 102
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

KOR 201 - Korean IV
Introductory Korean. Includes listening, speaking and writing, with individual audio-video practice. Builds on Korean 103
Credits: 4.00

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

KOR 202 - Korean V
Introductory Korean. Includes listening, speaking and writing, with individual audio-video practice. Builds on Korean 201
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

KOR 203 - Korean VI
Introductory Korean. Includes listening, speaking and writing, with
individual audio-video practice. Builds on Korean 202.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

KOR 301 - Korean VII
Advanced Korean. Focuses on reading, writing and conversational practices.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

KOR 302 - Korean VIII
Advanced Korean. Focuses on reading, writing and conversational practices. Builds on Korean 301.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

KOR 303-Korean IX
Advanced Korean. Focuses on reading, writing and conversational
practices. Builds on Korean 302.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: KOR 302 Minimum Grade: D
Repeat Status: Not repeatable for credit

Language Courses

LANG 180-Special Topics in Languages
Provides opportunities in language study commonly not taught in the
Modern Language Program. Course offers intensive language training and study of the historical, social and cultural imperatives of the country where the language is spoken. May be repeated for credit.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

## Linguistics Courses

LING 101 - Introduction to Linguistics
Introduces major topics in the study of language, including language
acquisition, language change, the social use of language, and the
analysis of discourse, and teaches basic techniques in linguistic analysis
through the use of a wide variety of language data.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

LING 102 - Language and Society
Develops understanding of how language is involved with relations of class, ethnicity, gender and aesthetics in society. The course covers the social investigation of language use, politeness in languages, different varieties of English dialects, slang, and rap, bilingualism and languages in immigrant communities, and language planning.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

## Mathematics Courses

MATH 004 - Trigonometry
Required for all students who did not have high school trigonometry and for those who did not pass the placement test in trigonometry. Covers the rectangular coordinate system and distance formula, angular measure and trigonometric functions of a number, variations and graphs of the trigonometric functions, trigonometric identities and equations, inverse trigonometric functions, and solutions of triangles applications. All terms.
Credits:
College: Arts and Sciences
Department: Mathematics

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

MATH 050 - Elements of Precalculus
This course covers topics essential for the study of calculus, including elements of algebra, geometry and trigonometry.
Credits:
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

MATH 100 - Fundamentals of Mathematics
Course covers properties of real numbers, algebraic expressions, rational expressions, linear and quadratic functions and graphs. This course is intended to give students the background needed to enroll in MATH 101.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must have the following Classification(s):
Freshman
Sophomore
Co-Requisites: EXAM 082
Repeat Status: Not repeatable for credit

MATH 101 - Introduction to Analysis I
Covers linear, quadratic, exponential, and logarithmic functions;
systems of linear equations; elementary linear programming; matrix algebra; inverse; and mathematics of finance.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education

Co-Requisites: EXAM 080
Pre-Requisites: DU Math 101 Placement Exam Minimum Grade: 061 or MATH 100 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 102 - Introduction to Analysis II
Covers limits, continuity, derivatives, indefinite and definite integrals, and applications.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 080
Pre-Requisites: MATH 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 107 - Probability and Statistics for Liberal Arts Probability and statistics in everyday life. The pitfalls of interpreting statistical data. A basic introduction to probability, chance, and gambling. Examples include coin-tossing, dice and roulette wheels. Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: MATH 100 Minimum Grade: D or DU Math 101
Placement Exam Minimum Grade: 060
Repeat Status: Not repeatable for credit

MATH 108 - Mathematics for Nursing Professionals
Math foundations needed in the calculation of dosages and solutions of medications. Topics include systems of measurement and calculating dosages involving tablets, capsules, liquids, and powders.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following College(s)/School(s):
Nursing \& Health Professions
Pre-Requisites: DU Nursing-Math Placement Exam Minimum Grade:
070 or MATH 100 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 110 - Precalculus
Reviews topics from algebra, geometry, and trigonometry essential for the study of calculus. For students planning to take Calculus I
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Freshman
Sophomore
Co-Requisites: EXAM 082
Repeat Status: Not repeatable for credit

MATH 119-Mathematical Foundations for Design
This course serves as an introduction to the mathematical concepts and tools most useful to students majoring in the Design Arts. Topics include functions, graphs, plane and fractal geometry, trigonometry, polar coordinates, and elementary topology.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Freshman
Sophomore
Co-Requisites: EXAM 080
Repeat Status:

MATH 121 - Calculus I
Functions, limits and continuity, derivatives, transcendental functions, and applications.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Freshman
Sophomore
Co-Requisites: EXAM 080
Pre-Requisites: DU Calc Placement Exam Minimum Grade: 070 or DU
Calc 2 Placement Exam Minimum Grade: 070 or MATH 110 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

MATH 122-Calculus II
Definite integrals, Fundamental Theorem of Calculus, integration techniques, applications of integration, numerical integration and differential equations.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 080
Pre-Requisites: MATH 121 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 123-Calculus III
Differential equations, Taylor's theorem, sequence and series, convergence, power series.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 080
Pre-Requisites: MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 180-Discrete Computational Structures
Covers basic concepts of discrete mathematics that are important to computing, including elementary set theory, recurrence relations, and graph theory.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MATH 102 Minimum Grade: D or MATH 121 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 181 - Mathematical Analysis I
Covers set theory, coordinate systems and graphs, functions, linear programming (geometric approach), matrices and linear systems, and linear programming (algebraic approach). Required for architecture, business administration, and construction management students. Noncredit for engineering and science students. Fall, Winter.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

MATH 182-Mathematical Analysis II
Covers counting techniques, probability, statistics, and probability applications. Non-credit for engineering and science students. All terms.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 181 Minimum Grade: D
Repeat Status: Not repeatable for credit

Covers limits, rates of change, derivatives, applications of differentiation, exponential and logarithmic functions, integrals, techniques of integration, applications of integration. Non-credit for engineering and science students. All terms.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 182 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 200 - Multivariate Calculus
Vectors, curves, partial derivatives, gradient, constrained optimization, coordinate system, multiple integrals, and applications.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 080
Pre-Requisites: MATH 122 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 201 - Linear Algebra
Systems of linear equations, matrix algebra, determinants, vector spaces, eigenvalues and eigenvectors, orthogonality, diagonalization applications.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 081
Pre-Requisites: MATH 121 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 205-Survey of Geometry
Axiomatic approach to geometry: plane geometry, transformational geometrics, and an introduction to classical non-Euclidean geometries Includes experimental approaches using appropriate software tools.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 210 - Differential Equations

Covers solution methods and properties for scalar and vector differential equations. Topics include linear and nonlinear equations, numerical methods, partial differential equations, separation of variables, and transform methods.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 200 Minimum Grade: D and MATH 201 Minimum
Grade: D
Repeat Status: Not repeatable for credit

MATH 220 - Introduction to Mathematical Reasoning
A transition course that develops the reasoning skills necessary for later courses. Emphasizes writing and presentation skills. Topics taken from set theory, logic, induction, relations, functions, and properties of the real number system.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

MATH 221 - Discrete Mathematics
Elementary set theory, combinatorics, elementary number theory, graphs, and special topics chosen from formal language theory, graph algorithms, coding theory, and other applications.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: EXAM 081
Pre-Requisites: MATH 220 Minimum Grade: D or CS 270 Minimum Grade: D or ECE 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 235 - Math Competition Problem Solving Seminar Problems from math competitions (such as the Putnam exam) are solved by students in this course. This course may be repeated four times for credit as topics vary.
Credits: . 50 to 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter

May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 200 Minimum Grade: D
Repeat Status: Course can be repeated 4 time(s)

MATH 238 - History of Mathematics
This course explores the history of mathematical concepts. Both the people involved and the environment in which the developments took
place will be studied. Mathematics from the time of Babylonia to the present will be discussed. The presentation will take a thematic approach, which may vary each term.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

MATH 239 - Mathematics for the Life Sciences
A broad survey of mathematical topics that are fundamental for application in the life science: multivariate calculus, differential equations, elementary probability. Emphasis on application.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 261 - Linear Algebra
Covers matrix arithmetic systems of linear equations, including vector spaces, coordinate systems, determinants, characteristic value problems, and Euclidean spaces, and application to quadratic forms and linear differential equations. Problems from engineering and science will be solved using applications such as MATLAB during the lab.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Mathematics
Pre-Requisites: MATH 189 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 262 - Differential Equations
Covers solutions of first-order equations, undetermined coefficient and variation of parameter methods of solution of higher order linear equations, systems of equations, and Laplace transform. Problems from
engineering and science will be solved using applications such as
MATLAB during the lab.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 279-Special Topics in Mathematics
Covers topics in pure or applied mathematics. Different topics may be considered in different quarters.
Credits: 12.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

MATH 285 - Differential Equations II
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 210 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 286 - Applied Differential Equations
Reviews basic methods, including applications to electric circuits, chemical mixtures, mechanics, and motion problems. Introduces partial differential equations. Spring. Alternate years.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 285 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 291 - Complex and Vector Analysis for Engineers

Complex and Vector Analysis for Engineers. Covers gradient, divergence, and curl; integral theorems curvilinear coordinates, complex differentiation and integration, Cauchy's Theorem, power series, residues and applications.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

Pre-Requisites: MATH 200 Minimum Grade: D and PHYS 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 300 - Numerical Analysis I
The course covers polynomial and trigonometric interpolation, splines, numerical linear algebra, numerical quadrature, solutions of nonlinear equations, and nonlinear optimization. The course emphasizes computational solutions.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: MATH 200 Minimum Grade: D and MATH 201 Minimum Grade: D and (CS 171 Minimum Grade: D or CS 123 Minimum Grade: D )
Repeat Status: Not repeatable for credit

MATH 301 - Numerical Analysis II
A continuation of MATH 300 . This course focuses on time dependent problems. It includes numerical solution of ordinary differential equation, the heat and wave equations, and moving interfaces. The discussed techniques include implicit schemes or ODEs, finite differences, spectral methods and the level set method.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 300 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 305 - Introduction to Optimization Theory
Provides a broad survey of mathematical techniques in optimization theory used in operations research and management science. Includes topics selected from the following categories: linear programming, integer programming, network flows, and nonlinear programming. Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 310 - Probability and Statistics
Not open to mathematics or computer science majors. Covers probability, probability distribution of discrete and continuous random variables, moment-generating functions, distribution of sample statistics, estimation and statistical tests, tests for goodness of fit, and regression analysis.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not be enrolled in one of the following Major(s):
Computer Science
Mathematics
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 311 - Probability and Statistics I
Covers sample spaces, axioms and theorems of elementary probability, random variables, distributions and expectation, mean, variance, moment-generating functions, Chebyshev's inequality, law of large numbers, and central limit theorem.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: EXAM 081
Pre-Requisites: MATH 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 312 - Probability and Statistics II
Covers estimation, consistency, unbiasedness, maximum likelihood, confidence intervals, hypothesis testing, Type I and Type II errors, Neyman Pearson lemma, likelihood ratio tests, and tests for means and variances.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman

Co-Requisites: EXAM 081
Pre-Requisites: MATH 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 316 - Mathematical Applications of Symbolic Software Mathematical Applications of Symbolic Software. Topics from calculus are investigated via complex problems requiring the use of symbolic mathematical software, primarily Maple. Numerical, graphical, and algebraic approaches are integrated. Limits, derivatives, root-finding, integration, and infinite series are explored in this context.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 121 Minimum Grade: D and MATH 122 Minimum
Grade: D and MATH 123 Minimum Grade: D and MATH 200 Minimum
Grade: D
Repeat Status: Not repeatable for credit

MATH 318 - Mathematical Applications of Statistical Software
Mathematical Applications of Statistical Software. Applications of modern statistical technologies and software, such as SAS, are used to describe and analyze data. Some topics covered are data management, collecting data, inferences for single and multiple population means, proportions count data, regression, correlation and nonparametric statistical methods. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 310 Minimum Grade: D or (MATH 311 Minimum
Grade: D and MATH 312 Minimum Grade: D )
Repeat Status: Not repeatable for credit

MATH 319-Techniques of Data Analysis
An applied course that considers the acquisition, analysis, visualization, and presentation of data. Emphasizes computation.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: (MATH 310 Minimum Grade: D or MATH 312 Minimum
Grade: D or STAT 201 Minimum Grade: D ) and MATH 318 Minimum
Grade: D
Repeat Status: Not repeatable for credit

MATH 320-Actuarial Mathematics

Covers probability in a risk management context. Univariate probability distribution including binomial, negative binomial, Poisson, uniform, exponential, normal, lognormal, Pareto, and Weibull distributions. Multivariate distributions including conditional and marginal probability distributions, joint moment generating functions, probability and moments for linear combinations of independent random variables and related topics.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 321 - Vector Calculus
Covers vector algebra; gradient, divergence, curl, and curvilinear
coordinates; Green's theorem, divergence theorem, and Stokes'
theorem; and applications.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 200 Minimum Grade: D and MATH 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 322 - Complex Variables
Introduces functions of one complex variable. Topics include the basic properties of analytic functions, power series, integration, residues and poles, and conformal mapping with applications.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 210 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 323 - Partial Differential Equations
Covers basic concepts and solution techniques for the standard partial differential equations of mathematical physics.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Pre-Requisites: MATH 200 Minimum Grade: D and MATH 201 Minimum
Grade: D and MATH 210 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 331 - Abstract Algebra I
Covers theory of groups, homomorphism and isomorphism, theory of rings, integral domains, ideals, unique factorization, and theory of
fields.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (MATH 220 Minimum Grade: C- or CS 270 Minimum
Grade: C- ) and (MATH 201 Minimum Grade: D or MATH 261 Minimum
Grade: D or ENGR 231 Minimum Grade: D )
Repeat Status: Not repeatable for credit

MATH 332 - Abstract Algebra II
Covers further topics in abstract algebra, including canonical decomposition of linear transformation, bilinear forms, multilinear algebra and determinants, finite fields, and selected short subjects.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 331 Minimum Grade: C-
Repeat Status: Not repeatable for credit

MATH 382 - Advanced Calculus
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

MATH 387 - Linear Algebra II
Covers linear transformations, including kernel and range; eigenvalues and eigenvectors; diagonalization of symmetric matrices; and application to differential equations, quadratic forms, and Markov chains. Fall.
Credits: 3.00
College: Arts and Sciences

Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 261 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 401 - Elements of Modern Analysis I
Covers the real number system, elementary topology, limits, infinite series, continuity, derivatives, and the Riemann integral.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (MATH 220 Minimum Grade: C- or CS 270 Minimum
Grade: C- ) and (MATH 201 Minimum Grade: D or MATH 261 Minimum
Grade: D or ENGR 231 Minimum Grade: D ) and MATH 200 Minimum
Grade: D
Repeat Status: Not repeatable for credit

MATH 402 - Elements of Modern Analysis II
Covers continuation of integration theory, improper integrals, sequences and series, power series, and uniform convergence.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 401 Minimum Grade: C-
Repeat Status: Not repeatable for credit

MATH 410-Scientific Data Analysis I
Fundamental principles and applications of statistics for scientific data analysis. Topics include data exploration, principles of probability distributions, Central Limit Theorem, hypothesis testing, $\mathrm{z}, \mathrm{t}$ and F tests, one-way analysis of variance, linear regression, and contingency table analysis. Programming statistical applications in $R$ will be included.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
Pre-Requisites: MATH 122 Minimum Grade: D or MATH 239 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 411 - Scientific Data Analysis II
Scientific data analysis and experimental design. Topics include multiple regression and model selection, nonlinear and logistic regression, analysis of covariance, multi-factor analysis of variance, nested, factorial and repeated measures experimental designs, random effects, and introduction to bootstrap methods and randomization tests.
Programming statistical applications in R will be included.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 410 Minimum Grade: C-
Repeat Status: Not repeatable for credit

MATH 422 - Introduction to Topology
Covers topological space, metric spaces, function, continuity, compactness, and connectedness.
Credits: 4.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

Pre-Requisites: MATH 201 Minimum Grade: D and MATH 221 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 475 - Cryptography
Classic cryptosystems, elementary number theory, RSA, ElGamal, discrete logarithms, digital signatures, plus a special topic selected from elliptic curves, information theory, and quantum cryptography.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: MATH 201 Minimum Grade: D and MATH 311 Minimum
Grade: D
Repeat Status: Not repeatable for credit

MATH 480-Spec Topics in Mathematics
Covers topics in Mathematics of interest to students or faculty.
Different topics may be considered during different quarters.
Credits: 12.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s)

MATH 483 - Discrete Event Simulation
Covers system simulation, Monte Carlo methods, discrete event modeling techniques, queuing models, programming considerations, statistical definitions and concepts, random number generation, output analysis, and design of computer experiments. Spring.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 385 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 450-Introduction to Graph Theory
Introduction to Graph Theory. Topics covered include paths and cycles, Eulerian graphs, Hamiltonian graphs, trees, matching, coloring,
planarity, and some additional topics in special graphs such as interval graphs.
Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

MATH 489 - Tensor Analysis
Covers tensor algebra, including coordinate transformations,
fundamental quadratic form, covariant and contravariant tensors, Riemannian metric, and applications. Elective. Spring. Alternate years. Credits: 3.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education

May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 381 Minimum Grade: D
Repeat Status: Not repeatable for credit

MATH 497-Ind Study In Math
Provides supervised study of selected topics in mathematics.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

MATH 498-Special Topics
Credits: 12.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.90 credit(s)

MATH 499 - Independent Study in Math
Credits: 6.00
College: Arts and Sciences
Department: Mathematics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s)

## Philosophy Courses

PHIL 101 - Introduction to Western Philosophy
Introduces the main methods and aims of Western Philosophy, involving the study of problems central to metaphysics, theory of knowledge, and ethics. Offered every quarter.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHIL 102 - Introduction to Eastern Philosophy
Introduction to the main topics of study in Buddhist, Hindu and other systems of Eastern thought.
Credits: 3.00

College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHIL 105 - Critical Reasoning
Introduces and develops the skills involved in reasoning effectively about experience, and being able to distinguish strong arguments form weak ones.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 107 - Philosophy and Knowledge Organization
This course imparts knowledge and skills associated with organizing concepts. The context for the course is the history of knowledge organization, viewed philosophically, with special emphasis on the Platonic, Cartesian, Kantian, Comtean and Digital paradigms. Students will learn to recognize the classical principles of knowledge organization and how to apply them using a "logic of concepts." Students will also come to understand how and why knowledge is organized the way it is in the modern university.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHIL 111 - Propositional (zero-order) Logic
An introduction to the fundamental concepts of symbolic logic: argument, validity, soundness, provability, completeness, consistency, decidability, entailment, logical equivalence, logical truth, logical contradiction. Covers truth-functional connectives, rules of formation and translation, and rules of inference. Proof techniques studies include natural deduction, truth-tables, and/or truth-trees.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 201 - Hist Of Western Philos I

Studies central works that have shaped Western Philosophy and culture from Classical times through the Renaissance and Reformation. Offered fall and spring quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 202 - Hist Of Western Philos II
Studies central works that have shaped Western Philosophy and culture
from the Renaissance through the late Nineteenth Century.. Offered winter and summer quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 203 - Hist Of Western Philos III
Studies central works that have had important impacts upon Western
Philosophy and culture from the Twentieth Century through the
present. Offered Fall and Spring Quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 207 - Predicate (first-order) Logic
Concentrates on syntax and semantics of quantification. Formation principles include A, E, I, and O statements (and square of opposition), domain of discourse, quantifier scope, multiple quantification, relations, and identity. Proof mechanics covered include natural deduction, instantiation, semantic tableau, and possible-world counterexamples. Also explored are the completeness, consistency, and decidability of first-order systems.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not have the following Classification(s):
Pre-Requisites: PHIL 111 Minimum Grade: D
Repeat Status: Not repeatable for credit

## PHIL 210 - Philosophy of Sport

Studies theories about philosophical issues arising in sport, in areas including its personal, social, aesthetic, and political dimensions.
Offered fall and spring; may alternate with PHIL 325 Ethics in Sports Management.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

PHIL 211 - Metaphysics
Studies theories about the nature of reality and philosophical issues
such as the nature of time, mind, personal identity, and free will.
Offered winter and summer quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 221 - Epistemology
Studies theories about knowledge that bear upon philosophical issues concerned with the nature and status of knowledge claims as expressed in concepts like belief, truth, and justification. Offered in fall and spring quarter.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 231 - Aesthetics
Studies theories about art and the nature of beauty that bear on
philosophical issues concerned with artistic production, performance,
and perception, such as arise in activities like painting, sculpture, film
literature, music, and dance. Offered in fall, winter and spring quarters; may alternate with PHIL 361 Philosophy of Science.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PHIL 241 - Social \& Political Philos
Studies theories about human social and political life that bear on philosophical issues such as the nature and scope of justice, the legitimacy of states, and the relationship between democracy, civil rights, and civil disobedience.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 251 - Ethics
Studies theories about human conduct which bear upon the rightness
and wrongness of actions, and the goodness and badness of ends,
including the nature, scope, purposes, and varieties of moral and
ethical theories. Offered every quarter.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 255 - Philosophy of Sex \& Love
This course investigates sexual activity and desire, and the morality of sexual behavior. It also examines various types of love and their links with sexuality. Figures studied include Plato, Aristotle, Augustine,
Aquinas, Kant, Kierkegaard, Freud and Foucault. Topics include marriage, prostitution, pornography, homosexuality, perversion, rape, intentionality, irreplaceability, unconditionality, reciprocity, and exclusivity.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Repeat Status: Not repeatable for credit

PHIL 301 - Business Ethics
Study of such moral issues as truth-telling, puffery, and lying $n$ business communications; employer-employee relations; obligations to
customers; obligations to foreign populations; and government
contracts. Offered fall and spring quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 305 - Communication Ethics
Ethical analysis of current laws and legislation aimed at regulating speech in the context of mass communications (radio, television and film). Offered winter and summer quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 311 - Computer Ethics
Ethical analyses of current laws and pending legislation aimed at regulating computer use as well as Internet practices and content. Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 315 - Engineering Ethics
Provides critical reflection on the nature of engineering and technology and on the ethical obligations and responsibilities unique to the engineering profession. Topics include the social responsibilities of engineering, the nature of professionalism, professional autonomy, whistleblowing, conflicts of interest, organizational (dis)obedience, the
ethics of risk assessment, and the place and purpose of engineering codes of ethics.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following College(s)/School(s):
Bennett S. LeBow Coll. of Bus.
College of Engineering
May not be enrolled in one of the following Major(s):
Business Administration
Economics
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

PHIL 317 - Ethics and Design Professions
Examines ethical theories and their application to architecture; the ethics of architectural space and place; the logic of ethical reasoning applied to the practice of architecture; professional ethics and the social responsibility of architects; the ethics of safety and risk in the production of architectural structures; sustainable environmental architectural design.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Architecture
Interior Design
Repeat Status: Not repeatable for credit

PHIL 321 - Biomedical Ethics
Studies moral issues related to health and disease, patients' rights and professional responsibilities, informed consent, abortion, euthanasia, and biomedical research.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 322 - Ethics of Human Enhancement
Discussion of developments in health-care with the potential not only to treat disease, but also to improve human performance and cosmetically change the human body, thereby creating ethical
considerations about the nature of health and disease and the proper scope and goals of health care.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: HSAD 210 Minimum Grade: D or PHIL 251 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PHIL 323 - Organizational Ethics
This course focuses on the application of ethical theories and principles to organizational systems and decision-making. Emphasis will be placed on how ethical principles affect and are applied to organizational policy-making, leadership behavior, systems of communication, technology use, and other systems of organization.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must have the following Classification(s):
Junior
Pre-Junior
Senior
Repeat Status: Not repeatable for credit

PHIL 325 - Ethics in Sports Management
An introduction to various ethical issues in sports and sports management, such as leadership and coaching; gender and racial equity in sports; fair play and cheating; violence and competition; commercialization of sports; the relation of sports to cultural value systems; ethics of technology and sports performance. Offered fall and spring; may alternate with PHIL 210 Philosophy of Sport.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

PHIL 330 - Ethical Issues in Criminal Justice
Studies ethical issues in the policies and practices of criminal justice, and theories that bear upon issues such as the relationship of law to justice, the definition of crime, the use of deception and coercion in law enforcement, and the purposes and varieties of criminal punishment. Offered fall and spring quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PHIL 335 - Global Ethical Issues
Offers an introduction to the ethical tensions of our age, globally construed. May address such issues as terrorism, genocide, religious exclusivism, nuclear proliferation, the regulation of the Internet, as well as culturally competing notions of right and wrong, and good and bad.
Offered winter and summer quarters; may alternate with PHIL 341
Philosophy of the Environment.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites:
Repeat Status: Not repeatable for credit

PHIL 341 - Philosophy of the Environment
Studies ecological issues from a philosophical standpoint stressing the implications of scientific and technological developments as they affect people's lives and choices. Offered winter and summer quarters. May alternate with PHIL 335 Global Ethical Issues.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 351 - Philosophy of Technology
Studies technology from a philosophical standpoint stressing its role in shaping human existence and values, considering issues such as the control and distribution of information, housing and city planning, automation, and the uses of technology in medicine. Offering in winter and summer quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 355 - Philosophy of Medicine
Examines the ideas of medicine, disease, and health from a
philosophical perspective. Examines such concepts as gender, mental-
illness, mind-body unity, aging and physical perfection as derived from both Eastern and Western traditions. Current health policy alternative treatment practices are also discussed.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PHIL 101 Minimum Grade: D or PHIL 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 361 - Philosophy of Science
Studies natural scientific theory-construction and investigative methods from a philosophical standpoint, considering issues such as the nature and scope of experimental method, and the history and justification of theory change. Offered fall, winter and spring quarters. May alternate with PHIL 231 Aesthetics.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 371 - Philosophy of Social Sciences
Studies social scientific theory-construction and investigative methods from a philosophical standpoint, considering issues such as the distinction between explanation and interpretation, and the history and justification of theory change. Offerings winter, spring and summer quarters. May alternate with PHIL 391 Philosophy of Religion.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 381 - Philosophy in Literature

Studies philosophical issues such as the concept of the self, the nature and course of evil, the nature and scope of free will, and ideals in living as they appear in significant works of literature. Offered in winter and summer quarters.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PHIL 385 - Philosophy of Law
This course addresses philosophical issues in the law. Topics include the meaning of "law," the nature and logic of legal (in contrast to moral)
concepts and principles, and competing conceptions of law (Natural
Law, Positivism, Realism, Rights-Based, etc.). Authors may include
Plato, Mill, Rawls, Hart, Dworkin and others.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PHIL 101 Minimum Grade: D or PHIL 102 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PHIL 391 - Philosophy of Religion
Studies various aspects of religious belief and experience from a philosophical standpoint, considering issues such as the definition and existence of God, the nature and course of evil, and the relationship between faith and reason in a religious life. Offered in winter, spring and summer quarters. May alternate with PHIL 371 Philosophy of the
Social Sciences.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PHIL 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 395 - Advanced Topics in Logic
Specialized topics, from among: self-reference paradoxes, set theory, axiomatization of arithmetic, computability, Church-Turing thesis, Gödel's theorem, minds and machines, Turing test, artificial intelligence, definitions of truth, models and satisfaction, analyticity,
syntax/semantics, ontological commitment, intention/extension, reference justifying deduction, nominalism/realism, multi-valued logic, intuitionism, modal logic, doxastic logic, and logic of moral discourse.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PHIL 111 Minimum Grade: D and PHIL 207 Minimum
Grade: D
Repeat Status: Course can be repeated 2 time(s) for 6.00 credit(s)

PHIL 399 - Independ Project In Philosophy
Provides directed reading and writing in philosophy. May be repeated twice for credit. Permission of Program Director required. Offered
every quarter.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Repeat Status: Course can be repeated 2 time(s) for 6.00 credit(s)

PHIL 421 - Seminar in Ancient Philosophy
Advanced study and discussion of the works of the leading philosophers and philosophical schools of Western antiquity. Reading and Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHIL 211 Minimum Grade: D and PHIL 221 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 425 - Seminar in Medieval Philosophy
Advanced study and discussion of the works of the leading
philosophers and philosophical schools of the Medieval period. Reading and Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy

Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHIL 211 Minimum Grade: D and PHIL 221 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PHIL 431 - Seminar in Rationalism \& Empiricism
Advanced study and discussion of the works of the leading
philosophers and philosophical schools of the Modern period (circa.
1500 A.D. to 1900 A.D.) on the European Continent and British Isles.
Reading and Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHIL 211 Minimum Grade: D and PHIL 221 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

PHIL 461 - Seminar in Contemporary Philosophy
Advanced study and discussion of the works by leading philosophers from 1900 to present. Reading and Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHIL 211 Minimum Grade: D and PHIL 221 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PHIL 465 - Seminar in American Philosophy
Advanced study and discussion of works by leading American
philosophers, including Peirce, James, Mead, Royce, C.I. Lewis, Quine, Davidson, Rorty and others. Reading and Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHIL 211 Minimum Grade: D and PHIL 221 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 475 - Special Problems in Philosophy
Topic for each term to be announced. May be repeated for credit.
Permission of Program Director required.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

PHIL 481 - Seminar in a Philosophical School Development of doctrines, theories, arguments and problems associated with one or more philosophical schools (or movements).
Schools (or movements) may include Pythagoreanism, Platonism,
Epicureanism, or recently, Positivism, Pragmatism, and Existentialism.
This course is Reading and Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHIL 211 Minimum Grade: D and PHIL 221 Minimum
Grade: D
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

PHIL 485 - Seminar in a Major Philosopher
Study of the works of a major philosopher such as Plato, Aristotle, Descartes, Locke, Hume, Kant, etc. Reading and Writing Intensive. Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHIL 221 Minimum Grade: D and PHIL 211 Minimum Grade: D

Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

PHIL 497 - Senior Essay I: Research \& Thesis
Individual supervision. Selection of research topic for the senior argumentative essay; collection and analysis of hard-copy and electronic research material; construction of bibliography. Initial thesis formulation and drafting of argument sketch. Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Philosophy
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

PHIL 498 - Senior Essay II: Argument Construction
Supervised construction of the main and supporting arguments of the senior essay involving drafting and re-drafting of the prose statement. Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Philosophy
Must have the following Classification(s):
Senior
Pre-Requisites: PHIL 497 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHIL 499 - Senior Essay III: Defense
Individual Supervision. Defense of the senior essay thesis before the philosophy faculty and fellow senior philosophy majors. Written replies to main criticisms as determined by the faculty supervisor. Final submission of senior essay. Writing Intensive.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Philosophy
Must have the following Classification(s):
Senior
Pre-Requisites: PHIL 498 Minimum Grade: D
Repeat Status: Not repeatable for credit

## Physics Courses

PHYS 050 - Preparation for Engineering Studies
PHYS-050 is a self-paced online course and is intended for students who need additional preparation in mathematics and physics to be successful in the beginning physics courses ( PHYS-101, 102). The online course is divided into six UNITS : Simultaneous Equations, Fundamentals of Plane Geometry, Use of Trigonometric Functions, Fundamentals of Solid geometry Vectors, and Kinematics. Each UNIT is organized in four sections: [i] Introduction; [ii] Interactive Problems; [iii] Sample Problems; and [iv]Tests.
Credits:
College: Arts and Sciences
Department: Physics
Repeat Status: Course can be repeated 99 time(s)

PHYS 100 - Preparation for Engineering Studies
This is a basic mathematics foundational course to prepare the students for the beginning sequence of Engineering Physics. Topics include: simultaneous equations, fundamentals of plane and solid geometry, use of trigonometric functions and vectors and translational kinematics.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not be enrolled in one of the following College(s)/School(s):
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

PHYS 101 - Fundamentals of Physics I
First of a four course sequence teaching fundamental physics to engineering and science majors. Topics include: description of motion, inertial and non-inertial frames, special relativity, Newton's Laws, translational and rotational equilibrium, one- and two-dimensional motion, fundamental forces, inverse square laws, Gauss' Law, Bohr's quantization, rotational dynamics, potential energy, black holes, determinism and chaos.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 080
Pre-Requisites: MATH 121 Minimum Grade: D and (DU Calc Placement
Exam Minimum Grade: 070 or DU Calc 2 Placement Exam Minimum
Grade: 070 ) or PHYS 100 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 102 - Fundamentals of Physics II
Second of a four course sequence teaching fundamental physics to engineering and science majors. Topics include: electrostatics, capacitors, charges in motion, insulators, semiconductors, conductors, superconductors, voltage and current measurements, magnetism, electromagnetic induction, magnetic materials, quantum dots, magnetic resonance phenomenon.

Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 080
Pre-Requisites: PHYS 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 103-General Physics I
Algebra-based course that covers force, motion, work, energy properties of matter, and wave motion and sound propagation. Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHYS 104-General Physics II
Algebra-based course that covers electricity and applications, magnetism, and optics.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 105-Computational Physics I
Introduces computational physics. Covers analytical and numerical solutions of equations governing the behavior of physical systems. Includes the use of Maple and simple FORTRAN/C/C++ programming methods to solve selected problems. Introduces UNIX, X-windows, programming languages, and visualization and data analysis tools for problems in computational physics. Introduces elementary
programming concepts as needed.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: (PHYS 113 Minimum Grade: D or PHYS 101 Minimum
Grade: D ) and CS 171 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 106 - The Physics of High Fidelity
Applies physical principles to understanding how hi-fi systems work. Includes consumer education in selecting components. This is a writing intensive course.

Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHYS 107-Acoustics
Covers the theory describing sound, behavior and sound waves, resonance and harmonics, frequency analysis, electronic production of sound, sound perception by the human ear, sound recording and reproduction, and room acoustics. Emphasis will be placed on understanding how sound operates in the physical world and how our ears respond to it.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHYS 113 -Contemporary Physics I
Part I in an introductory physics sequence for majors. This course combines the traditional lecture/lab format with real-time numerical simulations designed by the students. Topics include: the fund mental forces, Newton's laws, the atomic nature of matter, work and energy, light, friction, and atomic nuclei.
Credits: 5.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: MATH 121
Repeat Status: Not repeatable for credit

PHYS 114 - Contemporary Physics II
Part II in an introductory sequence for majors. This course combines the traditional lecture/lab format with real-time numerical simulations designed by the students. Topics include: angular momentum, entropy, gas dynamics, electric fields, electricity and matter, and electric potential.
Credits: 5.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: MATH 122
Pre-Requisites: PHYS 113 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 115 - Contemporary Physics III

Part III in an introductory sequence for majors. This course combines the traditional lecture/lab format with real-time numerical simulation designed by the students. Topics include: magnetic fields, electronics, radiation, waves and particles, and an introduction to semiconductor devices.
Credits: 5.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: MATH 123
Pre-Requisites: PHYS 114 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 121 - Physical Science for Design I
Offers a non-calculus-based survey of physical science for students in design and the visual arts. Topics include kinematics in two dimensions, forces, Newton's laws, applications using the constant acceleration model, energy, momentum, conservation laws, universal gravitation, circular motion, satellites, oscillatory motion, wave motion, sound, and music.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Co-Requisites: EXAM 080
Repeat Status: Not repeatable for credit

PHYS 122 - Physical Science for Design II
Continues PHYS 121. Topics include electricity, magnetism, em waves, light, geometrical and physical optics, anatomic structure, the
elements, and nuclear decay and nuclear energy.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Co-Requisites: EXAM 080
Pre-Requisites: PHYS 121 Minimum Grade: D
Repeat Status: Not repeatable for credit

Continuing Education
Repeat Status: Not repeatable for credit

PHYS 135 - How Things Work
This course examines the science behind everyday phenomena and devices. It uses real-world applications such as amusement park rides, microwave ovens, photocopiers, CDs, MRI, etc., as contextual vehicles to convey principles of classical and modern physics. It emphasizes conceptual understanding and uses pedagogy such as lecture demonstrations and active feedback.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Graduate Quarter
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PHYS 137 - Issues in Science and Religion
This survey course examines the interconnections and differences of science and religion, including topics as Cosmology, Human Origins, Prayer and Consciousness. Fundamental to the exploration of these theories are the examination of the historical, philosophical, psychological and sociological implications of these topics for society. Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PHYS 141 - Atm Sci I: Clim/Glob Chng
The atmosphere and its structure and variations; greenhouse effect; ozone depletion; the influence of weather on man; air pollution; acid rain.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: PHEV 142
Repeat Status: Not repeatable for credit

PHYS 142-Atmospheric Science I Lab
Introduction to climate analysis and methods
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHYS 143 - Atmos Scill-Wethr \& Fore
The atmosphere and its properties; weather systems; severe weather; hurricanes; weather forecasting
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Co-Requisites: PHEV 144
Repeat Status: Not repeatable for credit

PHYS 144 - Atmos Science II Lab
Introduction to meteorological analysis and forecasting methods.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PHYS 151-Applied Physics
Non-calculus-based introductory physics for business majors. Covers
basic mechanics and simple harmonic motion, followed by an
introduction to more advanced topics such as relativity,
electromagnetism, and quantum phenomena.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 081
Repeat Status: Not repeatable for credit

PHYS 152 - Introductory Physics I
First part of a three-course algebra-based sequence providing a comprehensive introduction to Physics. Covers basic mechanics, including motion in 1,2 , and 3 Newton's laws, gravitation, energy, momentum, rotational motion and elastic properties of materials.
Includes labs to enrich class material. High school physics not required.

## Credits: 4.00

College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 081
Repeat Status: Not repeatable for credit

PHYS 153 - Introductory Physics II
Second part of a three-course algebra-based sequence providing a comprehensive introduction to Physics. Covers fluids, vibrations, waves, sound, heat and thermodynamics, geometrical optics and optical instrumentation. Includes labs to enrich class material.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: EXAM 081
Pre-Requisites: PHYS 152 Minimum Grade: D or PHYS 101 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PHYS 154 - Introductory Physics III
Third part of a three-course algebra-based sequence providing a comprehensive introduction to Physics. Covers fundamentals of electricity and magnetism, including charges, fields, potential, circuits, magnetic induction, electromagnetic waves, special relativity, and physical optics. Includes labs to enrich class material.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 101 Minimum Grade: D or PHYS 152 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 160 - Introduction to Scientific Computing
Basic introduction to scientific problem solving and numerical modeling
of physical system using Excel and Maple.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PHYS 181 - Astronomy
Provides an overview of modern astronomy, including the scientific method; telescopes; stars and star clusters; stellar evolution; galaxies and the large-scale structure of the universe; and the Big Bang. May also include periodic visits to the university observatory.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Must be enrolled in one of the following College(s)/School(s):
School of Tech \& Prof Studies
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

PHYS 182 - Applied Physics I
Covers vectors; statics, kinematics, and classical dynamics, including Newton's laws, torque, projectile motion, and circular motion; work; power and energy; impulse and momentum; and rotation, in a non-calculus-based course. Fall.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 183 Minimum Grade: D and MATH 184 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

PHYS 183-Applied Physics II
Covers fluids; elasticity; vibration, including simple harmonic motion; sound waves and acoustics; thermodynamics of temperature; heat;
thermal-expansion; phase change; and heat transfer, in a non-calculusbased course. Winter.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 182 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 184-Applied Physics III
Covers light and illumination, electrostatics, potential, direct-current
electrical circuits, magnetic fields, induction, generators, motors, and
AC circuits, in a non-calculus-based course. Spring.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 183 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 185 - Fundamentals of Physics Lecture I

First of a three course sequence teaching fundamental physics to engineering and science majors. Topics include: description of motion, inertial and non-inertial frames, special relativity, Newton's Laws, translational and rotational equilibrium, one- and two-dimensional motion, fundamental forces, inverse square laws, Gauss' Law, Bohr's quantization, rotational dynamics, potential energy, black holes, determinism and chaos.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Co-Requisites: MATH 186
Pre-Requisites: MATH 121 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 186 - Physics I-A
A companion course for PHYS 185. Students will perform experiments related to Mechanics. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: PHYS 185 Minimum Grade: D (May be taken
concurrently)
Repeat Status: Not repeatable for credit

PHYS 188-Physics II-A
A companion course for PHYS 189. Students will perform experiments related to Electricity and Magnetism. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: PHYS 189 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

PHYS 189 - Fundamentals of Physics Lecture II
Second of a four course sequence teaching fundamental physics to engineering and science majors. Topics include: electrostatics, capacitors, charges in motion, insulators, semiconductors, voltage and current measurements, magnetism, electromagnetic induction, magnetic materials, quantum dots, magnetic resonance phenomenon. Credits: 3.00

College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 185 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 201 - Fundamentals of Physics III
Third of a four course sequence teaching fundamental physics to
engineering and science majors. Topics include: oscillations, EM waves, interference, diffraction, wave-particle duality, energy-matter equivalence, uncertainty relations, Schrodinger's equation, Hydrogen atom, laser, and nuclear physics.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 081
Pre-Requisites: PHYS 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 202 - Fundamentals of Physics IV
Fourth of a four course sequence teaching fundamental physics to engineering and science majors. Topics include: statistical kinetic, equipartition of energy, entropy, ultra-low temperatures, thermal transport, interaction of charged particles and light with biological tissue, fiber optics, IR, Raman, spectroscopy, fluidics, and microfluidics. Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Co-Requisites: EXAM 081
Pre-Requisites: PHYS 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 217-Thermodynamics
Covers macro-thermodynamics: temperature, pressure, work, heat, equations of state, the first and second laws of thermodynamics and their applications, heat engines and refrigerators, thermodynamics potentials, Maxwell relations, theory of phase changes, kinetic theory and transport phenomena.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 114 Minimum Grade: D or PHYS 102 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

PHYS 222 - Modern Physics
Covers special relativity and the electron, black-body radiation, quantum theory of radiation, Bohr theory, wave particle duality, Schrodinger equation, and nuclear phenomena.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 223 - Modern Physics Laboratory
Requires students to perform experiments in modern physics, including the Millikan oil-drop experiment, the photoelectric effect
measurement, spectrometer experiments, atomic spectra observations, the Frank-Hertz experiment, the decay rate of radon, and a beta particle range experiment. This is a writing intensive course. Some or all pre-requisites may be taken as either a pre-requisite or co-requisite.
Please see the department for more information.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 115 Minimum Grade: D (May be taken
concurrently) or PHYS 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 226-Instrumentation for Scientists I
Introduces measurement concepts, including a systems approach to analog and digital measurement, amplification and feedback, electrical data domains, measurements of varying analog signals, time domain measurements and conversions, and $A / D$ and $D / A$ conversions. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PHYS 227 - Instrumentation for Scientists II
Covers optimization of scientific measurements, including systems analysis, signal/noise, control of frequency response, modulation and demodulation, relation of sampling parameters to signal characteristics, and signal-to-noise ratio enhancement. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 226 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 231 - Introductory Astrophysics
An introductory astrophysics course aimed at science majors. Topics
include a treatment of orbits, Kepler's laws, celestial coordinates, light, blackbodies, optics, stellar structure and evolution, galactic formation, and large scale evolution and structure of the universe.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (PHYS 101 Minimum Grade: D or PHYS 113 Minimum
Grade: D ) and MATH 121 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 232-Observational Astrophysics
Covers photometric and spectroscopic properties of stars, galaxies, and quasars and fundamental astrophysics of these objects. The course contains a significant lab component, which includes training in methods of observation, using the Joseph Lynch Observatory on campus to obtain astronomical measurements, and analysis of data. Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 113 Minimum Grade: D and MATH 121 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

PHYS 280 - Fundamentals of Physics Lecture III
Third of a three course sequence teaching fundamental physics to engineering and science majors. Topics include: oscillations, EM waves, interference, diffraction, wave-particle duality, energy-matter equivalence, uncertainty relations, Schrodinger's equation, Hydrogen atom, laser, and nuclear physics.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 282 - Fundamentals of Physics Lab III
A companion course for PHYS 280. Students will perform experiments related to Thermodynamics and modern physics. Some or all prerequisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: PHYS 280 Minimum Grade: D (May be taken
concurrently)
Repeat Status: Not repeatable for credit

PHYS 305 - Computational Physics II
Covers the application of computational techniques to problems in physics, including numerical solution of differential equations, computation and display of particle trajectories in arbitrary potentials, introduction to non-linear dynamics, random numbers and MonteCarlo methods, and numerical implementation of selected methods in mathematical physics. Emphasizes hands-on experience in problem-
solving, using both Maple and C.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: and CS 171 Minimum Grade: D PHYS 105 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 306 - Computational Physics Laboratory I
Covers numerical solution of selected problems in electromagnetic theory, including solution of Laplace's equation, relaxation methods, computation of field lines and equipotentials, multipole expansions and computation of spherical harmonics, and solutions of Maxwell's equations and the wave equation.
Credits: 2.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 305 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 307 - Computational Physics Laboratory II
Covers numerical solution of selected problems in quantum mechanics, including solution of the time-independent and time-dependent forms of the Schrodinger equation; the matrix form of quantum mechanics,
basis expansions, and bound-state solutions; and computation of wave packet propagation.
Credits: 2.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 305 Minimum Grade: D and PHYS 327 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 311 - Classical Mechanics I
Covers motion in one, two, and three dimensions, conservation laws, and damped harmonic oscillator, forced harmonic oscillator, and central force motion.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 210 Minimum Grade: D and (PHYS 115 Minimum
Grade: D or PHYS 201 Minimum Grade: D )
Repeat Status: Not repeatable for credit

PHYS 312-Classical Mechanics II
Covers motion of system of particles, center of mass and conservation of linear momentum, description of collisions, Rutherford scattering, dynamics of rigid bodies, coordinate systems, the restricted three-body problem, generalized coordinates, Lagrange's equations and Hamilton's equations, and rotation of frame.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 317-Statistical Mechanics
Covers distribution molecular velocities, transport phenomena, Maxwell-Boltzmann statistics, and quantum statistics.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Pre-Requisites: MATH 210 Minimum Grade: D and PHYS 217 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 321 - Electromagnetic Fields I
Covers fields due to specified charge distributions, Gauss' law, multipole expansion of the fields, Laplace's equation, method of images, dielectrics, and energy of an electrostatic field. Some or all prerequisites may be taken as either a pre-requisite or co-requisite. Please see the department for more information.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 115 Minimum Grade: D (May be taken concurrently)
Repeat Status: Not repeatable for credit

PHYS 322 - Electromagnetic Fields II
Covers electric current, continuity equation, electromotive forces,
magnetic fields, electromagnetic induction, magnetic properties of matter, Maxwell's equations, radiation, and radiation by moving charges.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 321 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 324 - Topics in Mathematical Physics
This course presents the mathematical background needed for Thermodynamics, Classical Mechanics, Electricity \& Magnetism, and Quantum Mechanics using the theory of linear vector spaces and the standard tools of elementary mathematical physics. Emphasis will be placed on the use of analytic and numerical programming techniques, using Maple, FORTRAN and C.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PHYS 326- Quantum Mechanics I
Explores the classical foundations of quantum mechanics, the Schrodinger equation, solutions of one-dimensional problems, and the one-dimensional harmonic oscillator.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 327-Quantum Mechanics II
Covers the three-dimensional Schrodinger equation, angular momentum, matrix mechanics, the hydrogen atom, and perturbation theory.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 326 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 328 - Advanced Laboratory
Requires students to perform advanced laboratory experiments in the various fields of physics.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 223 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 330 - Introduction to Nuclear Physics
Provides an overview of nuclear physics; including nuclear structure; nuclear stability; radioactivity and nuclear decay; nuclear forces and interactions; fission and fusion; and the interaction of particles with matter. A small amount of quantum mechanics will be included.
Credits: 2.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

Pre-Requisites: (PHYS 115 Minimum Grade: D or PHYS 201 Minimum Grade: D ) and (MATH 210 Minimum Grade: D or ENGR 232 Minimum Grade: D )
Repeat Status: Not repeatable for credit

PHYS 399 - Independent Study in Physics
Credits: 12.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

PHYS 405 - Advanced Computational Physics
Covers the application of computational techniques to one or more research topics of current interest, including grid-based solutions of partial differential equations in one and two dimensions and particle methods in fluid mechanics. Introduces high-performance computation and massively parallel computing platforms.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Pre-Requisites: PHYS 305
Repeat Status: Not repeatable for credit

PHYS 408 - Physics Seminar
Requires participation in weekly departmental colloquium.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 15 time(s) for 15.00 credit(s)

PHYS 409 - Astrophysics Seminar
This course focuses on topics in modern astrophysics. Each term, a series of papers in a subfield is chosen. Students present and discuss recent results in fields such as stellar structure, black holes, cosmology, and dynamics. May be repeated twice for credit.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter

Pre-Requisites: PHYS 231 Minimum Grade: D or PHYS 232 Minimum Grade: D
Repeat Status: Course can be repeated 2 time(s) for 2.00 credit(s)

PHYS 428-Quantum Mechanics III
Advanced topics in quantum mechanics including spin, addition of angular momentum, scattering theory, relativistic quantum mechanics, atoms and molecules, and radiation from atoms.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 327 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 431 - Galactic Dynamics
Covers dynamical problems ion astrophysics, including the two-body
problem, galactic stability, globular clusters, spiral arms and galactic
collisions. Computational methods such as calculation of grid-based
and particle-based potentials will also be discusses and applied.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 432-Cosmology
Covers cosmological models, age and distance scales in the universe, the hot big bang, primordial nucleosyntesis, inflation, baryonic and non-baryonic matter, galaxy formation and evolution, dynamics of structure formation, statistics of cosmological density fields, and cosmic background fluctuations.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 451 - Quantum Structure of Materials
Introduces modern physics, including wave-particle duality; quantum mechanics of electrons located in one-dimensional potentials;
introduction to solid-state physics; electronics in periodic potentials and energy band structure; numerical computations; metals, semiconductors, and insulators; electronic devices; quantum devices; and laboratory experiments in scanning tunneling microscopy and atomic force microscopy.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 452 - Solid State Physics
Atomic basis of the physical properties of materials, including crystalline and non-crystalline solids. Detailed introductory treatment of the structural, vibrational, and electronic properties of solid and their inter-relationships. Overview of other materials, properties, and scientific basis of technological applications.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 317 Minimum Grade: D and PHYS 326 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 453 - Nanoscience
Scientific basis of nanoscale materials and systems including discussions of low-dimensional structures and their physical properties, the selfassembly of nanostructures, applications in various fields of science and technology, and techniques for fabrication and characterization on the nanoscale.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: PHYS 321, PHYS 326
Pre-Requisites: PHYS 311 Minimum Grade: D and PHYS 217 Minimum Grade: D
Repeat Status: Not repeatable for credit

## PHYS 461 - Biophysics

A one course introduction to biological physics. Topics may include: structure of biomolecules, protein stability, electron transfer, protein folding, protein substrates, allostery, and self-assembly. No biological background is presumed.
Credits: 3.00
College: Arts and Sciences
Department: Physics

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 317 Minimum Grade: D
Repeat Status: Course can be repeated 1 time(s) for 3.00 credit(s)

PHYS 462 - Computational Biophysics
This course involves mathematical applications of biological simulations. Using classical and statistical mechanics, we will cover topics including atomic scale simulations, statistical sampling and models of molecular cellular systems and living processes.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Co-Requisites: PHYS 321
Pre-Requisites: PHYS 305 Minimum Grade: D and PHYS 317 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 463 - Single Molecule Methods
Covers the principles, operations and applications of the most commonly used single molecule methods in biophysics, including scanning probe microscopy and spectroscopy, optical trapping and fluorescence resonance energy transfer techniques.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PHYS 217 Minimum Grade: D and PHYS 322 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 471 - Nonlinear Dynamics
This course introduces the basic ideas of the new science of nonlinear dynamics and develops methods to carry out fundamental
computations of fractal dimension, Lyapunov exponents, and topological invariants.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: MATH 200 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 476 - Nuclear and Particle Physics
Covers the nucleus as a neutron-proton system, including stable and unstable nuclei, nuclear spectra and radioactive decay, fission and fusion, quarks and leptons, experimental methods, fundamental forces,
the quark model of hadrons, electroweak unification, and unifying theories.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Junior
Sophomore
Pre-Requisites: PHYS 327 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 480-Special Topics
Covers selected topics in physics. May be repeated for credit. Credits: 12.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

PHYS 485 - Research
Covers research problems in physics.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PHYS 491 - Senior Research I
A three-term sequence devoted to theoretical or experimental activities in a specific area of physics or atmospheric science to be chosen in consultation with a faculty adviser. Requires students to learn to identify interesting problems, develop a plan of attack, and carry the project to completion. Requires written and oral report at the end of the third term.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

Continues PHYS 491.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 491 Minimum Grade: D
Repeat Status: Not repeatable for credit

PHYS 493 - Senior Research III
Continues PHYS 492. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PHYS 492 Minimum Grade: D
Repeat Status: Not repeatable for credit

## Physics-Environmental Science Courses

PHEV 141 - Atmospheric Science I: Climate and Global Change Covers the atmosphere and its structure and variations, the greenhouse effect, ozone depletion, the influence of weather on humans, air pollution, and acid rain. This is a writing intensive course. Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHEV 142-Atmospheric Scil Lab
Introduces climate analysis and methods. This is a writing intensive course.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHEV 143 - Atmos Sci II: Wthr Anal/Forcst
Covers the atmosphere and its properties, weather systems, severe weather, hurricanes, and weather forecasting.
Credits: 3.00
College: Arts and Sciences

Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHEV 144 - Atmospheric Sci II Lab
Introduces meteorological analysis and forecasting methods. This is a writing intensive course.
Credits: 1.00
College: Arts and Sciences
Department: Physics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PHEV 145 - Weather I: Climate and Global Change Introduction to the Earth's atmosphere and climate system including the structure and interaction of the components of this system.
Students learn basic meteorological ideas and concepts. Special topics include weather satellite and Doppler radar imagery, daily weather discussions, the greenhouse effect and ozone depletion. Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PHEV 146 - Weather II: Analysis and Forecasting
Course covers real problems of weather analysis and forecasting. Components focus on surface and upper-air weather maps, westerlies and the jet stream, mid-latitude cyclones, thunderstorms, tornadoes and hurricanes. Special topics include weather instruments and observations, atmospheric optics and climate analyses.
Credits: 4.00
College: Arts and Sciences
Department: Physics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PHEV 346-Atmospheric Dynamics
Covers equations of motion on a rotating earth; balanced horizontal motion and the thermal wind relation; equation of continuity; mechanism of pressure change; application of circulation and vorticity to atmospheric motion, viscosity, turbulence, and diffusion; and energy and stability relationships.
Credits: 3.00
College: Arts and Sciences
Department: Physics
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: MATH 200 Minimum Grade: D and PHYS 211 Minimum Grade: D
Repeat Status: Not repeatable for credit

## Political Science Courses

PSCI 100 - Introduction to Political Science
Studies the political process, which determines who gets what, when, and how in society.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 110-American Government I
Introduces the elements of the American political system.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 120 - History of Political Thought
Introduces the Western tradition of political thought, examining a
selection of works by major political thinkers. Draws on primary
sources, with a textual and conceptual emphasis.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 130 - Research Methods in Political Science I
Introduction to basic principles of political science writing and research design. Students learn how to locate, use, and evaluate information
from a wide range of government agency websites and political science databases.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PSCI 140 - Intro Comp Political Analysis
Examines methods used to compare state political systems with respect to world order values in varying geographic and cultural settings.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

PSCI 150 - International Politics
Analyzes nation-states in their external relations, including the interaction of the great powers with each other and with emerging areas.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 211 - American Government II
Provides a structural analysis of selected social, economic, and political institutions at various levels of government in the American political system.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PSCI 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSCI 220-Constitutional Law I
Introduction to Constitutional law and the federal courts. Examines the emergence of judicial review, the judiciary's role in the system of check and balances, and the powers and limitations on each branch of government.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PSCI 110 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSCI 230 - Research Methods in Political Science II

This course is designed to provide the student with concepts, principles and tools of research methodology. Includes projects such as survey and content analysis.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PSCI 130 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSCI 240 - Comparative Government
Examines the political process through the ideology and institutions of major constitutional and totalitarian powers.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSCI 140 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSCI 250 - American Foreign Policy
Examines current issues in American foreign policy, including the assumptions underlying policy goals, the means of achieving them, and the decision-making machinery.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PSCI 150 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSCI 255 - International Political Economics
Analyzes the contradiction between the political-military world and the newly emerging trading world, and its impact on future global political systems.
Credits: 4.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 270 - Problems of Individual Liberty and Government Authority

Examines the relationship between personal freedom and a just society from a variety of perspectives, all of which are designed to serve as an introduction to history and politics.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSCI 120 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

PSCI 272 - Contemporary Political Issues
Examines a current policy issue in its political context. See departmental brochure for subject scheduled in a particular term. May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

PSCI 313 - State \& Local Government
Examines major political, social, and economic problems of state, local, and metropolitan governments.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 323 - Comparative Political Thought
Studies modern political thinkers from African, Asian, Latin American, and other traditions of political thought. Uses a textual and conceptual emphasis, but also considers the political movements and social practices that have embraced or given birth to the works of the selected authors.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 327 - Democratic Theory
Examines the works of various classical and contemporary thinkers on the nature, justification, and practice of democracy. Emphasizes matters of liberty, equality, participation, and social choice.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 329-Theories of Justice
Examines the nature and realization of justice in modern societies, with special attention to contemporary questions of civil rights.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 330 - Public Opinion \& Propaganda
Examines public opinion and propaganda from a variety of perspectives, including the process of opinion formations and change and its role in the development of public policy and methods of measurement and analysis of public opinion.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 331-Environmental Politics
Examines environmental politics, focusing on the United States. Solving environmental problems is not simply a question of using available science and technology; rather, proposals to combat environmental degradation confront political context that may or may not favor the aims of environmental policy. Understanding politics is therefore indispensable for effective environmental problem-solving.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PSCI 335 - Political Communication
Introduces an investigation of the relationship between politics and communication, with the goal of developing an understanding of political communication's role in election campaigns, news coverage,
political debates, political advertising, and "normal" portrayals of the political system through media and interpersonal communication.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 340 - Politics of Developing Nations
Analyzes problems of political and economic development
(modernization) in the Third World, with the focus on Africa.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 344 - Introduction to 20th Century Middle East
An introduction to the major historical events and political issues that define the region of the Middle East in the 20th century, including Zionism, Arab nationalism, Islamic fundamentalism, and the war on terror.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 345 - Compar Politics Middle East
Introduces students to political issues and challenges that face Middle Eastern men and women and deepens their understanding of comparative politics in non-Western cultures and nations. Analyzes such common problems as nationalism, religion, and state/society relations, then examines in depth four countries representing various regimes. Assumes some familiarity with Middle Eastern history and concentrates primarily on contemporary politics and political economy. Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):

Freshman
Pre-Requisites: PSCI 150 Minimum Grade: D or PSCI 344 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 357 - The European Union
This course combines an introduction to the history and institutions of the European Union with a special analysis of EU enlargement and institutional reform.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 358 - Political Economy of Japan
Examines Japanese political economy on a global scale, focusing on her economic and trade relations with the United States, the Soviet Union, China, and Western Europe.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 363 - Constitutional Law II
Examines protections for civil liberties afforded by the First Amendment of the Constitution, specifically those related to speech, the press, religion, and assembly.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 364-Constitutional Law III
Examines Constitutional civil rights claims arising under the Fourteenth Amendment equal protection and due process guarantees. Focuses on claims concerning discrimination on the basis of race, gender, and sexual orientation, as well as those asserted under an individual right to privacy in matters of reproductive rights, sexual conduct, and end of life decisions.
Credits: 3.00
College: Arts and Sciences

Department: History \& Politics

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 365 - Politics, Law, \& Justice
Examines justice as politically determined, including the personnel,
policies, and practices of units of the legal system, especially civil,
criminal, and juvenile courts in urban areas.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 366 - Supreme Court and American Politics
This course focuses on the workings of the modern Supreme Court: theories of judicial interpretation; internal decision-making processes; the interplay of law and politics on the Court's personnel, agenda, and rulings; and the role of interest groups in shaping the Court's jurisprudence.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 367 - International Law
Examines the legal norms, codes resolutions, treaties conventions, court decisions, customs and other sources that comprised international law. Provides analysis of applications, especially in Europe.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 370 - Topics in Public Policy

Provides an in-depth exploration of an important public-policy issue or issue area in American or international life. Explores the origins, development, alternatives, and future consequences of an issue within the context of a political system. May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

PSCI 371 - Science, Technology, \& Public Policy
Examines the political effects of technological change, including public policy efforts to affect the impact of scientific development. Covers topics including atomic energy, electronic communications, and weapons development.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 372 - City in US Political Development
Course examines the role of the American city in the larger project of state-building. Topics covered include the changing functions of cities over American history; the role of cities in national political coalitions; and the construction of ethnic, racial, and class identities as a process or urbanization.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 374 - Politics of Sport
The material in this course comes from a variety of disciplines and schools of thought with political science serving as an overarching framework. Issues covered include ethnicity, gender, race, nationalism, globalism, economics, and class.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

PSCI 375 - Politics of Immigration
This course is designed to introduce the student to the issues associated with immigration from both a US and international as well as a historical and contemporary perspective. Emphasis will be focused on the theory, public policy and philosophical issues that are associated with this area of inquiry.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 376-Running for Political Office
This course is designed to introduce the students to both the theory and practice of running for political office. Emphasis will be placed upon both the theoretical and applied aspects of political campaigns. The course will use a combination of readings, a text, films, lectures, and guest speakers.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 377 - Politics of Latin America
Analysis of contemporary politics in South and Central American, as well as Cuba, with several in-depth country cases. Comparative themes include: legacies of military rules, economic dependency and revolution; dynamics of democratic transition, economic reform and U.S. hegemony; and, problems of domineering presidents weak parties and marginalized social groups.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSCI 470 - Jun Seminar Political Science
A research seminar directed by a political scientist. Requires students
to write an extended paper on a topic selected in consultation with the instructor. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

PSCI 472 - Spc Studies Political Science
Provides supervised individual study of special subjects in political science. May be repeated for credit.
Credits: 12.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

PSCI 490-Senior Seminar I
Requires an intensive research project supervised by a political scientist. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSCI 491 - Senior Seminar II
Requires completion of the project begun in PSCI 490. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSCl 490 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSCI 492 - Political Science Honors Thesis I
Students develop and begin an in-depth research project under the supervision of a political scientist. Course is restricted to seniors with a minimum 3.30 GPA.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following Major(s):
Political Science
Must have the following Classification(s):
Senior
Pre-Requisites: PSCI 211 Minimum Grade: D and PSCI 220 Minimum
Grade: D and PSCI 230 Minimum Grade: D and PSCI 240 Minimum

Grade: D and PSCI 250 Minimum Grade: D and PSCI 270 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

PSCI 493 - PSCI Honors Thesis II
Students complete an in-depth research project under the supervision of a political scientist.
Credits: 3.00
College: Arts and Sciences
Department: History \& Politics
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Must be enrolled in one of the following Major(s):
Political Science
Must have the following Classification(s):
Senior
Pre-Requisites: PSCI 492 Minimum Grade: D
Repeat Status: Not repeatable for credit

## Psychology Courses

PSY 101-General Psychology I
Reviews the fundamental principles, concepts, and methods of
psychology, with emphasis on the concepts of motivation, learning, and
perception, and their psychological foundations.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSY 111 - Preprofessional Gen Psych I
Preprofessional General Psychology is designed for majors and for other preprofessionals who are interested in Psychology as a minor. A scientific approach to the study of psychology is taken. An overview of the fundamental principles of psychology across a variety of subdisciplines is offered. Part one is part of a two-part sequence and focuses on the experimental bases of psychology.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSY 112 - Preprofessional Gen Psych II
Preprofessional General Psychology is designed for preprofessionals who are interested in psychology or related fields, especially designed for majors, and may be taken by minors of psychology. It follows Preprofessional General Psychology I and includes a laboratory component to enhance the scientific approach to psychology. Part two
focuses on the application of scientific principles of psychology to human behavior.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PSY 111 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 120 - Developmental Psychology
Examines the nature of developmental processes-perceptual, intellectual, emotional, and social-and the factors influencing and
limiting them.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSY 140-Approaches to Personality
Discusses the major concepts of Freud, neo-Freudians, behaviorists, humanists, trait theorists, and others. Emphasizes understanding of self and others for psychotherapy and research. Fall.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSY 150 - Introduction to Social Psychology
Examines theoretical and research findings in personal experiences of interacting with others in family and group settings, and with society in general.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSY 210 - Evolutionary Psychology
Covers principles of genetics and evolution as applied to the behavior of the important types of living beings, from plants and unicellular organisms to the primates (including humans).
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 212 - Physiological Psychology
Reviews neural foundations of behavior, including the study of nerve activity and brain function.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 213 - Sensation and Perception
Examines the structure and function of the senses, including vision, hearing, touch, temperature, pain, olfaction, gustation, time, and kinesthesia. Considers interaction of the senses and their role in determining behavior.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 222 - Psych Probs Modern Youth
Examines psychological problem areas frequently encountered by young adults in today's society, including identity crisis, family conflict, the new sexuality, drugs, and the search for intimacy.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 225 - Child Psychopathology
This class will focus on the symptoms, etiology, and primary methods of treating common psychological disorders and problems of children and adolescence. The course will focus on diagnosis; assessment; specific therapeutic treatments; ethical issues; and gender, cultural, and developmental differences in symptoms, diagnosis, and response to treatment.

Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 230-Psychology of Learning
Introduces basic principles of the science of learning. Emphasizes I. P.
Pavlov's classical conditioning, B. F. Skinner's operant conditioning, and
applications to counseling and therapy.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 240 - Abnormal Psychology
Offers advanced course in the general study of personality. Focuses on the way our society defines, explains, and handles behavior perceived as deviant and "normal." Requires field trip. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

PSY 242 - Psychology of Disability
Psychological and social consequences of physical disability for the disabled person and his or her family and social network. Emphasis on disabilities of the sensory and nervous systems. Practicum component. Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 244 - Culture and Personality

This course focuses on comparing specific human behaviors (e.g. aggression, health), roles (e.g. gender), and psychological processes (e.g. cognition, emotion, perception) across cultures in order to ascertain similarities and differences among cultures around the globe. This course has an interdisciplinary focus.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 245 - Sports Psychology
Covers sports psychology, which is the science of understanding,
modifying, and predicting athletic performance or sports participation.
This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 250 - Industrial Psychology
Covers theories, experiments, and problem-solving efforts of behavioral scientists in industrial settings for students interested in interpersonal relations, management, leadership, personnel, and applied psychology. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 252 - Death and Dying
Explores death and dying from various perspectives, including the
philosophical, psychological, sociocultural, and personal.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Freshman

Repeat Status: Not repeatable for credit

PSY 254 - Psychology of Sexual Behavior
Examines psychology of the individual coping with the sexual aspects of life.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 260 - Psychological Research I
This course provides an introduction to the issues, techniques and methodologies associated with conducting psychological research. Topics to be covered include the logic of research in psychology, important issues in deciding how to study various psychological phenomena, ethical issues and guidelines in conducting psychological research, design and analysis of psychological research, assessing threats to internal and external validity, methods used in the interpretation of psychological data, and writing research reports in the style used by research psychologists.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

PSY 305 - Sci/Pseudoscience in Psych
Science and Pseudoscience in Psychology. Fosters critical thinking skills regarding the evaluation of paranormal, unusual, or extraordinary phenomena (e.g. ESP, recovered memories of abuse). Examines ways that a human cognition leads to strange beliefs despite contradictory data. The distinctions between science and pseudoscience are highlighted.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 310 - Drugs \& Human Behavior

Covers the fundamentals of drug effects on the nervous system and behavior, with emphasis on abused substances and drugs used in the treatment of behavioral disorders.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D ) and PSY 230 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 320 - Educational Psychology
Covers role and relevance of psychology in the teacher-learner relationship, with independent application of research techniques in an individual field study. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

PSY 322 - Adv Developmental Psych
Provides in-depth exploration of child and adolescent physical, cognitive/intellectual, and psychosocial development. Students have the opportunity to observe children and their caregivers through videotaped vignettes created to bring developmental principles to life. Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

## Freshman

Pre-Requisites: (PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D ) and PSY 120 or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 330-Cognitive Psychology
Covers human thought processes, including perception and pattern recognition, learning and memory, language, problem-solving, and decision-making.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 332 - Human Factors \& Cognitive Engr
Discusses ways of designing machines, operations, and work environments so that they match human capacities and limitations.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 336 - Psychology of Language
This course is a survey of the theories and methodologies in the psychology of language. It covers topics such as language acquisition, comprehension, and production, as well as the relation between language and thought and the question of the uniqueness of language in the animal kingdom.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 337 - Human-Computer Interaction
Applies cognitive and experimental psychology to understanding how to improve the design and usability of interactive computing systems. Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 340-Psychological Testing and Assessment

Enables the student to gain an understanding of the proper uses and applications of psychological evaluation by focusing on psychometric properties and reviewing selected tests and evaluation procedures commonly employed by psychologists in research and clinical practice. Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 342 - Counseling Psychology
Covers theory and practice of establishing helping relationships.
Includes role-playing, analyzing, and observations.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 345 - Narrative Psychology
This course explores the historic contributions to the narrative tradition in psychology and its current research and theoretical concerns. We will discuss contributions to the construction of meaning from bioethics and medical humanities, qualitative research, the neuroscience of memory, literary theory, and social, cognitive, and developmental psychology.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 350 - Advanced Social Psychology
Provides in-depth exploration of topics in the social influence process, including current research in social cognition, attitude change, and group dynamics.
Credits: 3.00
College: Arts and Sciences

Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 150 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 352 - Environmental Psychology
Multidisciplinary study of the interrelationship between human behavior and the natural, built, and social environments.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 355 - Health Psychology
Health Psychology is designed to: concentrate on the application of psychological theories and variables to compromising and health enhancing behaviors; demonstrate the psychological management of chronic illness; and the role of psychologists written medical and health settings. For example, it focuses on the effects of stress on the body, the mind-body connection, and how psychology can affect physical well-being.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

## PSY 356 - Women's Health Psychology

Explores the major psychological and behavioral factors influencing health and illness among women. Topics, such as lifecycle challenges (PMS and reproductive health), chronic diseases, and new directions in health promotion are addressed.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D

Repeat Status: Not repeatable for credit

PSY 357 - The Psychology of Eating Disorders and Obesity Covers determinants of eating behavior and body weight as well as psychological treatments for them. Factors influencing eight regulation will be reviewed. The causes, consequences, and treatments for anorexia and bulimia nervosa and binge eating disorder will be reviewed. Finally, the courses will review the causes, consequences and treatments for obesity.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 360 - Experimental Psychology
Provides a study of the basic scientific fundamentals of the experiment with emphasis upon the critical thinking this method represents in establishing psychological principles. Contrasts are made to such modern pseudosciences as parapsychology. A final experiment is required of all students in this course. This is a writing intensive course. Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: (PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D ) and PSY 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 364 - Computer-Assisted Data Analysis I
Covers data analysis using a mainframe statistical package covering basic elementary techniques of data reduction, manipulation, and statistical analysis.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 365 - Computer-Assisted Data Analysis II
Covers more advanced statistical techniques, such as regression, correlation, analysis of variance, and multiple regression.
Credits: 3.00
College: Arts and Sciences

Department: Psychology

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 364 Minimum Grade: D and (PSY 112 Minimum
Grade: D or PSY 101 Minimum Grade: D )
Repeat Status: Not repeatable for credit

PSY 368-Critical Psychology
In this course we examine underlying values and beliefs of the field and
place them in the context such as inequity, social justice, power
relations, and what type of knowledge counts, to arrive at a more
critical understanding of the practices and theories in psychology.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 370 - Forensic Psychology
This course describes the psychological processes involved in the legal system. The material delves into the growing field of psychological study and application in the legal field.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 401 - History Systems Psych
Examines the historical foundations of modern psychology, with emphasis on the growth, contributions, and decline of major systems and theories.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 410 - Neuropsychology
Provides a study of the relationship between human brain function and behavior. Examines basic anatomy of the brain and focuses on principles of human neuropsychological functioning. Studies cortical and "higher cognitive functioning" in depth through a focus on both normal and brain-injured individuals.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D or PSY 112 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 440 - Advanced Personality Seminar
Examines historical and contemporary trends and methods in personality research and assessment. Students have an opportunity to evaluate strengths and limitations of these trends and methods, as well as develop their own ideas.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 140 Minimum Grade: D and (PSY 101 Minimum
Grade: D or PSY 112 Minimum Grade: D )
Repeat Status: Not repeatable for credit

PSY 442 - Theors \& Practice Clin Psych
Provides an overview of clinical psychology theory and practice
including professional issues, assessment strategies, and psychotherapy theories. Students have the opportunity to develop their own
philosophy of clinical psychology and to apply theories to case examples.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum

## Grade: D

Repeat Status: Not repeatable for credit

## PSY 445 - Positive Psychology

The course provides an overview of the emerging subfield of psychology known as "positive psychology". This area focuses on investigating and understanding positive aspects of well-being and
health, including various human strengths, such as resilience, optimism, spirituality, hope, and problem-solving.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: PSY 101 Minimum Grade: D or PSY 112 Minimum
Grade: D
Repeat Status: Not repeatable for credit

PSY 450 - Autism Spectrum Disorders
This course introduces students to research and issues involving individuals with autism spectrum disorders. Topics include societal perceptions of the disorder, epidemiology, advocacy, assessment and evaluation, adult issues, and legal issues. Course includes an overview of common interventions. Students plan and carry out interviews with individuals with autism as part of the final project.
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: PSY 120 Minimum Grade: C
Repeat Status: Not repeatable for credit

PSY 460 - Adv Psych: Lab App \& Tech
Introduction to variety of laboratory techniques; survey of how basic psychological theories and knowledge influence actual practice in the psychological laboratory. Laboratory exercises will focus on development of the research skills necessary for independent research. Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 477-Senior Seminar I
In-depth exploration of selected topics. Projects selected by students in consultation with professor
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education

May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 478 - Senior Seminar II
Continuation of PSYCH 477
Credits: 3.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

PSY 480 - Directed Studies in Psychology
Provides supervised reading and studies in special fields of contemporary psychology. See department brochure for topics and terms offered.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

PSY 490 - Psychology Senior Thesis I
An in-depth exploration of selected topics. Projects are selected by students in consultation with a faculty member. The students conduct these projects over the course of three terms in which they take PSY 490,491 , and 492 . This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Psychology
Must have the following Classification(s):
Senior
Repeat Status: Not repeatable for credit

PSY 491 - Psychology Senior Thesis II
An in-depth exploration of selected topics. Projects are selected by students in consultation with a faculty member. The students conduct these projects over the course of three terms in which they take PSY 490, 491, and 492. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
Must be enrolled in one of the following Major(s):
Psychology
Must have the following Classification(s):
Senior
Pre-Requisites: PSY 490 Minimum Grade: D
Repeat Status: Not repeatable for credit

PSY 492 - Psychology Senior Thesis III
An in-depth exploration of selected topics. Projects are selected by students in consultation with a faculty member. The students conduct these projects over the course of three terms in which they take PSY 490, 491, and 492. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Psychology
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Psychology
Must have the following Classification(s):
Senior
Pre-Requisites: PSY 491 Minimum Grade: D
Repeat Status: Not repeatable for credit

## Russian Courses

RUSS 101 - Russian I
Introductory Russian. Includes listening, speaking, and reading, with individual audiolingual practice. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

RUSS 102-Russian II
Continues RUSS 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 103-Russian III
Continues RUSS 102. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 201 - Russian IV
Intermediate Russian. Includes listening, speaking, reading, and writing, with individual audiolingual practice. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 202 - Russian V
Continues RUSS 201. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 203 - Russian VI: Convrs \& Comp
Continues RUSS 202. Provides intensive practice in comprehension and written and oral communication. Emphasizes development of writing skills and increased oral competence in everyday situations. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 301 - Russian VII
Advanced Russian. Provides reading, writing, and extensive conversational practice. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 302 - Russian VIII
Provides advanced practice in translation, comprehension, and written and oral communication. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 301 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 303-Russian IX
Continues RUSS 302. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 302 Minimum Grade: D
Repeat Status: Not repeatable for credit

RUSS 399-Adv Independ Study Russian
Provides supervised study of special subjects in Russian language and literature. Offered all terms.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

RUSS 411 - Intro Russian Stylistics
Fourth year of Russian. Provides advanced practice in translation, comprehension, and written and oral communication. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

RUSS 431 - Intro Russian Literature
Provides intensive reading, writing, and conversational practice in Russian, based on selected texts in Russian literature. Offered twice each year.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

RUSS 451 - Intro Bus \& Prof Russian
Fourth year of Russian. Provides intensive oral practice and written
work in business, professional, and commercial Russian. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: RUSS 303 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

RUSS 480 - Russian Minor Thesis Course
Independent research study on a topic selected by the student.
Independent study is supervised by a faculty member and guided by a
plan of study. At the end of the course, the student is required to
produce a paper and oral defense on the topic of his paper.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

RUSS 499 - Independent Study in Russian
Credits: 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s)

## Sociology Courses

SOC 101 - Introduction to Sociology
Examines principles underlying human interaction in simple technological societies, including learning and development of social roles; development and meaning of culture and social organizations; and special institutions in the society, such as the family, class structure, and power structure.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

SOC 110 - Sociology of the Future
Examines ideas, values, and methods of the world's leading futurists
(e.g., Bell, Henderson, Kahn, and Tofler). Focuses particularly on the energy challenge, the information revolution, and postindustrial
scenarios.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

## SOC 115 - Social Problems

Examines conceptions and misconceptions regarding the causes and cures for social problems such as unemployment, urban decline, crime, health care, and discrimination.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

SOC 120 - Sociology of the Family
Examines structure and functions of the family and the roles, relationships, problems, and opportunities of family living from a variety of perspectives. Uses lectures, field experiences, and discussion. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 125 - Sociology of Aging
Introduces the multidisciplinary scientific study of the causes and consequences of aging, its history, methods of research, major theoretical approaches, and empirical findings.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

SOC 137-Issues in Science and Religion
This survey course examines the interconnections and differences of science and religion, including the scientific and religious theories of
such topics as Cosmology, Human Origins, Prayer and Consciousness.
Fundamental to the exploration of these theories are the examination
of the historical, philosophical, psychological and sociological
implications of these topics for society.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

SOC 150 - Sex and Society
This course examines how sexualities are socially produced and reproduced. Topics of study include gender and sexuality; changing social meanings of variant sexual orientations and practices; the effect of birth-control technologies, sexually transmitted infections and sexual violence on sexual norms; the commodification of sex and the social control of sex.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

Repeat Status: Not repeatable for credit

## SOC 204-Criminology

Criminology is the scientific study of crime, criminal behavior and societal responses to crime and to crime victims. Students will study theories of crime causation, crime types, ethics of research, data collection and methods of crime prevention and control. Issues such as capital punishment, gun control and restorative justice will be debated. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 205-Criminology \& Criminal Justice
Introduces the scientific study of crime and criminals. Analyzes the
theoretical and empirical literature on causation and control. Examines
our criminal justice system and approaches to corrections.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

Examines practical ongoing or proposed reforms for local, national, and global problems. Assesses realistic techniques for countering prejudice, tension, discrimination, and backlash.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 215 - Industrial Sociology
Provides "practical wisdom" in recognizing, analyzing, and anticipating psychological, sociological, technological, and economic changes of work systems.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

SOC 220 - Wealth and Power
Examines the extent of differences in wealth and political power in modern society and looks at the origins and implications of those differences.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

## SOC 225 - Sociology of Technology \& Aging

This course will provide and introduction to the emerging field of
"gerontechnology," i.e., technological tools designed to help older and chronically ill persons maximize their independence and manage their
health issues. Special attention will be paid to the social, policy, design and ethical aspects of technology acceptance and implementation. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s): Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 230 - Women \& Men-Changing Soc

Explores the status and roles of modern women and men, with emphasis on changes in family relationships, career options, and lifestyle alternatives.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 235-Sociology of Health
Examines the history, economics, and politics of our health-care system and the effects of technology on the quality of health care.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SOC 101 Minimum Grade: D or ANTH 101 Minimum
Grade: D
Repeat Status: Not repeatable for credit

## SOC 240 - Urban Sociology

Provides an overview of the contemporary process of urban change and of key problems and policy issues. Concentrates on five concerns: the evolution of urban economics; life and culture in the city today;
race, ethnicity, gender, and class of urban populations; urban politics and social forces; and new directions in urban development.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

## SOC 250 -Research Methods I

Covers research design, including ethics of research, sampling, survey research, interviewing, field experiments, and content analysis.
Involves multidisciplinary examples and application in seminar format with student production of original projects.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 260-Classical Social Theory
Critically examines the ideas of the classical sociological theorists (e.g., Marx, Durkheim, and Weber). This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 268-Sociology of Sport
The course looks at the cultural and social aspects of sport. Students will be introduced to sport as a ubiquitous institution of American Society, to the essential characteristics and functions of sport, and to the historical and sociological study of sport.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

SOC 270 - Theory of Applied and Community Sociology Introduces the theory and methods of participatory research, focusing on exemplary case studies. The roots of participatory sociology in liberation theology, feminism, and Deweyian pragmatism are presented.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 274 - Sex, Violence \& Crime on the Internet
This course explores how offenders are adopting computers to commit traditional crimes in a hi-tech manner. Specific attention will be paid to how the Internet has affected the structure of hate groups and the child pornography and sexual predator subcultures. Cyber-stalking and online harassment will also be examined.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 275 - Issues in Domestic Violence

Domestic Violence is a major public health problem. This course will describe DV in the context of multiple response systems including health care, police, advocacy, and criminal justice. We will explore how DV affects men, women and children and examine societal conditions that allow DV to occur and continue.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

SOC 276-Introduction to Computer Crime
This course provides an overview of computer crime. Emphasis will be placed on the legislative responses and policy issues related to computer intrusions and cyber-fraud. Issues encountered when enforcing laws in cyberspace and the public/private sector initiatives for dealing with computer crime will also be explored.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Repeat Status: Not repeatable for credit

SOC 277 -Introduction to Correctional Practices
This course will provide insight into corrections through theory, laws and contemporary practices, facilities management, reentry and alternatives to incarceration. Corrections involve the 'treatment and rehabilitation of offenders through a program involving penal custody, parole, and probation' (Merriam-Webster). This course will include site visits, guest lecturers and case analysis.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

SOC 310-Topics in Political Sociology
Examines social bases of politics; political power, bureaucracy, and social structure; sources and development of democracy and
dictatorship; and political attitudes, movements, and parties.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 4 time(s) for 12.00 credit(s)

SOC 311 - Topics in Sociology of Religion
Examines the sociological basis of religion, religious thought and movements as well as the organization and social function of religion on social institutions and groups.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 4 time(s) for 12.00 credit(s)

SOC 312 - Topics in Soc of Sci and Tech
Examines the sociological basis of scientific theorizing, knowledge production and research as well as the organization and social function of scientific labor and the impact of applied science on social institutions and groups.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 4 time(s) for 12.00 credit(s)

SOC 315 - HIV/AIDS and Africa
This course focuses on the social construction of HIV/AIDS ¿ it explores the culture, social, epidemiologic, political, psychological, philosophical, economic, public health, and public policy dimensions of HIV/AIDS on a global level, especially in sub-Saharan Africa. Students examine case studies, interviews and documentaries on HIV/AIDS in Africa.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SOC 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 320-Sociology of Deviant Behavior
Examines theories of deviance, focusing on their attribution of causation and the implications for correction and/or control at both the individual and societal levels. Includes topics such as alcoholism, mental illness, criminality, and other deviant behaviors.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 325 - Introduction to Urban and Environmental Planning This course serves to introduce students to the field of urban and environmental planning. In doing so, this course seeks to expose students to the skill sets used by planners: including the planning process; citizens participation models; community needs assessment; data analysis and presentation; plan implementation and evaluation; and professional ethics.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

## SOC 330 - Dev Nations/Intnt'I Div Labor

Focuses on the ways in which the international economy affects the class structure, politics, and development of developing nations.
Focuses particularly on multinational corporations and on the successes and failures of import-substitution and export-oriented industrialization programs.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):

## Continuing Education

May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 335-Sociology of Education I
First course of a two-term sequence. Provides a general introduction to the sociology of education through the study of social, political, and cultural forces operating on public education in the United States and Britain. Examines theories, methods, and case studies to explore issues of identity formation, inequality, and class reproduction in an attempt to understand the role of schooling in contemporary life.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

## Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites:
Repeat Status: Not repeatable for credit

SOC 336 - Sociology of Education II
Continues SOC 335. Students will be involved as literacy coaches
tutoring critical literacy skills. Upon completion of 40 hours of tutoring, students will receive a Certificate of Literacy Teaching.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication

Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SOC 335 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 340-Globalization
This course investigates the causal factors for the emergence of what is known as globalization, global economy, global village, etc. It covers the effects of global changes on national political systems, on ecology and on local cultures. The role of the US and reactions to the new world order will also be considered.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 341 - Environmental Movements in America
Focuses on key collective actors and institutions that are involved in the creation of U.S. environmental policies, including historical and cultural processes of change involving social movements, environmental advocacy organizations, foundations, and the media.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 343 - The American Experience of the Wilderness
Focuses on the ecological systems and the biodiversity; various social constructions and ideologies surrounding the idea of wilderness that inform practices toward nature; and the development of wilderness protection efforts.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

SOC 344-Social Movements

Focuses on historical and social processes by which social movements arise, set in motion of social change, and the outcomes of social movement efforts.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

## SOC 345-Sociology of the Environment

Examines acts of nature vs. acts of man, food and health,
environmental politics, social movements and environmental issues, environmental and development policies, and environmental and global change.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 346-Environmental Justice
Focuses on the political economy of environmental injustice and the impact of social movements addressing it; impact of chemical pollutants on human health; and the scientific and legal issues surrounding the study and regulation of pollutants.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

SOC 347 - Introduction to Environmental Policy Analysis Introduction the development and implementation of U.S. environmental policy, including historical development, political process, methods of analysis and creation of laws, regulations and budgets.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 349-Sociology of Disasters
Focuses on social aspects of disasters, such as: collective behaviors (panic, crime, improvisation); warning, evacuation and perception of risk; social responses to natural and technical disasters; scientific uncertainties and technical disasters; social produced age, gender, racial/ethnic and social class vulnerabilities to disaster; terrorismcaused disasters; and disaster preparedness and prevention.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 350 - Research Methods II
Covers planning, design, and implementation of evaluation studies, including the role of the researcher, ethics, and legal concerns in program and policy decision-making.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SOC 250 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 364 - Computer-Assisted Data Analysis
This course uses the computer as a tool in organizing and manipulating a numerical database, as well as in performing statistical analyses.
Simulation and modeling may also be covered.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SOC 250 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 365 - Computer-Assisted Data Analysis II
Building on SOC 364, this course covers more advanced statistical techniques such as regression, correlation, analysis of variance and multiple regression.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):

Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SOC 364 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 370 - Practicum in Applied and Community Sociology
This course is central to the newly adopted emphasis of the sociology
major on participatory research. These courses are intended as the practicum and supervised project-oriented research work for community organizations and agencies.
Credits: . 50 to 5.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

SOC 373 - Environmental Crimes
An examination of the criminal consequences of the violation of laws, regulations and policies governing clean water, air and toxic substances. Analysis of case studies from a variety of perspectives
including crime scene investigations and potential terrorism
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 374 - Restorative Justice
Restorative justice is a paradigm shift in criminal justice in response to the failure of the traditional retributive model to meet the needs of victims, offenders and the community. Programs have developed worldwide often sponsored by governments, others by non-profits, to handle both juvenile and adult criminal offences more effectively. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: CJ 206 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 376 - Sentencing: The History, Necessity and Morality of Punishment in America
The course is an exploration of punishment, its various philosophies, theories and approaches. The costs and outcomes of incarceration as
well as alternatives will be examined as well as disparities regarding age, gender, race in our sentencing. A review of the ultimate sanction, the death penalty will complete the course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: SOC 206 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 377 - Intellectual Property Theft in the Digital Age
This seminar focuses on the changing nature of intellectual property theft in the Digital Age. Attention will be paid to legislative solutions for protecting intellectual property and the challenges faced when investigating the theft of intellectual property. Additionally, theoretical explanations to account for intellectual property theft will be explored. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

## SOC 380 - Special Topics in Sociology

This course will explore current issues and debates in Sociology. It will be conducted as a seminar. The topic will vary each term.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

SOC 395 - Seminar in Sociology
The sociology majors' seminar is taken every year for repeating credit. A peer monitored seminar in which students discuss and support each other's research and scholarship. It features guest faculty and non
faculty discussants, and provides majors with a focused exposure to the process of research and scholarship.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Major(s):
Sociology
Repeat Status: Course can be repeated 5 time(s) for 15.00 credit(s)

SOC 435-Seminar - Organ of Amer States

Prepares students to participate in a model session of the Organization of American States (OAS). Covers international political economy, structure and operation of OAS, characteristics of designated country, and public speaking and debate. Open to students in international area studies and sociology. May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must be enrolled in one of the following Major(s):
Communication
International Area Studies
Sociology
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

SOC 460 - Contemporary Social Theory
Covers a broad range of theories that guide contemporary sociological thought This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: SOC 260 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 470-Social Change \& Planning
Seeks answers to questions such as: How can we cope with future shock? How can we formulate our own plans, initiate careful policies, and guide large-scale-change efforts for the future?
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

SOC 490-Sociology Research Seminar I
An in-depth exploration of selected topics. Projects are selected by students in consultation with a faculty member.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Junior
Senior
Repeat Status: Not repeatable for credit

SOC 491 - Soc Research Seminar II
Continuation of Soc 490
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Must have the following Classification(s):
Senior
Pre-Requisites: SOC 490 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 492 - Soc Research Seminar III
Continuation of Soc 491
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SOC 491 Minimum Grade: D
Repeat Status: Not repeatable for credit

SOC 495 - Directed Studies in Sociology
Provides supervised study that allows students to explore topics of their own choosing individually.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

Spanish Courses

SPAN 101-Spanish I
Introductory Spanish. Includes listening, speaking, reading, and writing.
Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

SPAN 102 - Spanish II
Continues SPAN 101. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:

May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 103-Spanish III
Continues SPAN 102. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 102 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 201 - Spanish IV
Intermediate Spanish. Includes grammar review, listening, speaking, and reading. Recommended for students who wish to attain oral competence. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 103 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 202 - Spanish V
Continues SPAN 201. Offered all terms.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 201 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 203 - Spanish VI: Conversation \& Comprehension
Provides intensive practice in comprehension and written and oral
communication. Emphasizes development of writing skills and increased oral competence in everyday situations. Offered all terms. Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 202 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 311 - Intro Spanish Stylistics
Provides advanced practice in comprehension and written and oral communication, based primarily on periodicals and contemporary media. Offered all terms. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 203 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 312-Spanish Stylistics
Continues SPAN 311. Provides extensive study of the techniques of translation and communication. Offered all terms. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 311 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 313 - Advanced Spanish Stylistics
Continues SPAN 312. Provides advanced training in oral and written communication in Spanish. Particularly recommended for students who have pre-proficiency status, Spanish minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Course can be repeated 0 time(s)

SPAN 331 - Intro Spanish Lit Studies
Advanced Spanish. Reading, writing, and extensive conversational practice based on masterpieces of Spanish literature.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

Includes reading and oral and written analysis of representative texts in Spanish and Spanish-American literature, including familiarization with the historical and cultural contexts. Offered as needed.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 333-Adv Spanish/Span Am Lit
Continues SPAN 332. Provides advanced study of Spanish and Spanish-
American literature. Offered as needed.
Credits: . 50 to 20.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 351 - Intro Bus \& Prof Spanish
Advanced year. Provides intensive oral practice and written work in business, professional, and commercial Spanish. Offered as needed. Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 352 - Business \& Prof Spanish
Advanced business and professional Spanish. Advanced practice in oral
and written Spanish for business and the professions. Based on
advanced texts, periodicals, and technical journals.
Credits: 3.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 353 - Adv Business \& Prof Spanish
Provides advanced study in business and professional terminology, with emphasis on the structure and protocols of the business world. Offered as needed.
Credits: . 50 to 20.00
College: Arts and Sciences

Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Not repeatable for credit

SPAN 371 - Spec St Spanish Civil \& Cult
Presents an integrated approach in Spanish to the civilization, culture, history, and literature specific to the areas in which the language is spoken, with emphasis on the development and evaluation of cultural values. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

SPAN 399 - Adv Independ Study Spanish
Provides supervised study of special subjects in Spanish language and literature. Offered all terms. This is a writing intensive course.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites:
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

SPAN 411 - Spec St Adv Spanish Stylistics
Continues SPAN 313. Particularly recommended for students who have proficiency status, Spanish minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

SPAN 431-Spec St Adv Spanish Lit
Continues SPAN 333. Particularly recommended for students who have proficiency status, Spanish minors, and students interested in graduate study and/or international careers. Offered as needed. This is a writing intensive course.
Credits: 3.00

College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

SPAN 451 - Sp St Adv Bus/Prof Spanish
Continues SPAN 353, with emphasis on the structure and protocols of the European Union. Particularly recommended for students who have proficiency status, Spanish minors, and students interested in graduate study and/or international careers. Offered as needed.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

SPAN 471 - Spec St Spanish Civilization
Presents an integrated approach, at the advanced level, to the civilization, culture, history, and literature of a given period specific to the areas in which Spanish is spoken, with emphasis on the development and evaluation of cultural values. Offered as needed. This is a writing intensive course.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: SPAN 312 Minimum Grade: D
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

SPAN 480-Spanish Minor Thesis Course
Independent research study on a topic selected by the student. Independent study is supervised by a faculty member and guided by a plan of study. At the end of the course, the student is required to produce a paper and oral defense on the topic of his paper.
Credits: 4.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Repeat Status: Not repeatable for credit

SPAN 499-Special Topics in Spanish
Recommended for Spanish minors and for students with proficiency
status. Offered all terms. This is a writing intensive course.
Credits: . 50 to 12.00
College: Arts and Sciences
Department: Culture and Communication
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 99 time(s) for 998.90 credit(s)

## Women's Studies Courses

WMST 101 - Introduction to Women's Studies
Offers an interdisciplinary, cross-cultural survey of the ways in which gender interacts with race, age, and class to shape human consciousness and determine the social organization of human society. Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

WMST 240 - Women/Society Global Context
Studies women in a global society with one major area covered during each offering. Offered each year to accommodate one major world area.
Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

WMST 250-African American Herstories
Students gain insights into three distinct historical periods of African American (American) History and a cross section of African American life through the reading, analysis, and discussion of selected African American women's autobiographies.
Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

WMST 275 - Women's Health \& Human Rights
This course explores the relationships between women's health and human rights under political and socially constructed influences. Health
and well being are intricately associated with fundamental rights. We will conduct a comprehensive overview of women's health by engaging in lectures, class discussions, readings, journaling, group work, interviews and in-class activities.
Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

WMST 280-Spec Top Women's Studies
Gives students an opportunity to apply the interdisciplinary
methodology of women's studies to a focused topic. Topics to be
announced. May be repeated for credit.
Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

WMST 299 - Independent Study in Women's Studies
Independent study on a topic selected by the student. Independent study is supervised by a faculty member and guided by a plan of study. Credits: 12.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Course can be repeated 98 time(s) for 998.00 credit(s)

WMST 301-Seminar in Feminist Theory
Studies theoretical perspectives offered by feminist scholars in a range of disciplines from literature to politics. Proceeds from the assumption that feminist approaches yield different answers to traditional questions and pose new questions for critical inquiry.
Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: WMST 101 Minimum Grade: D
Repeat Status: Not repeatable for credit

WMST 308-Queer Theory
In an attempt to theorize the meaning of "queer" (and, in turn, its
counterparts - "normal" and "straight") and to articulate what "queer theory" is/does, this course will examine major attempts to challenge
the concept of "normal" and explicate the meaning and use of the concept "queer".
Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Repeat Status: Not repeatable for credit

WMST 320-Masculinities
An exploration of how masculinity is lived its multiple forms, traditional and alternative, in contemporary Western society. This course aims to arrive at a theory of masculinity $¿$ what does it mean to be
¿masculine¿?
Credits: 3.00
College: Arts and Sciences
Department: Women's Studies
Restrictions:
May not have the following Classification(s):
Freshman
Repeat Status: Not repeatable for credit

## Writing Courses

WRIT 210 - Writing \& Peer Tutoring Wkshop
A practicum course which trains students to become Peer Tutors in the Drexel Writing Center; focuses on reading and discussing many different kinds and aspects of writing. This is a writing intensive course. Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Pre-Requisites: (ENGL 101 Minimum Grade: C and ENGL 102 Minimum
Grade: C ) or ENGL 105 Minimum Grade: C
Repeat Status: Not repeatable for credit

WRIT 220 - Creative Nonfiction Writing
A writing workshop in which in which students will read and write nonfiction; emphasis is placed on experimenting with different forms as the personal essay, literary journalism, nature writing, science writing and editing and preparing manuscripts for publication. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

WRIT 225 - Creative Writing
A workshop course in composing imaginative forms of personal expression, including poems, short stories, plays, and personal essays.
This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum

## Grade: A

Repeat Status: Not repeatable for credit

WRIT 301 - Writing Poetry
A writing workshop in which students will read and write poetry; emphasis is placed on experimenting with different forms of poetry, editing, and manuscript preparations for publication. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

WRIT 302 - Writing Fiction
A creative writing workshop course focusing on fiction. Students read and write short stories. Students develop skills by creating complete fictional works and critiquing the work of other students. Emphasis placed on narrative structure, prose style, pacing, voice and tone, appropriate material, character, plot, description, dialogue, and editing. Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Not repeatable for credit

WRIT 303 - Writing Humor and Comedy
A creative writing course focusing on humor and comedy. Students read and write satire, essays, social commentary and special forms. Students develop skills by creating complete works and critiquing the work of other students. Emphasis is placed on writing for specific audiences, narrative structure, prose style and editing.
Credits: 3.00
College: Arts and Sciences

Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

WRIT 304 - Special Topics in Writing
A variable topics course in writing in which students will read and write in different genres, according to the specific topic (i.e., Writing Fiction; Joking, Comedy and Laughter: Memoir and Autobiography: Nature Writing); emphasis is places on editing and manuscript preparation for publication. This is a writing intensive course.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum Grade: A
Repeat Status: Course can be repeated 3 time(s) for 9.00 credit(s)

WRIT 306-Writing About the Media
This course teaches students how to write about media events and artifacts (books, movies, theatre, music, etc.), both as individual works and in a larger cultural context. It also teaches them about the kinds of media outlets which publish reviews and the style of writing these outlets favor.
Credits: 4.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
Pre-Requisites: (ENGL 101 Minimum Grade: D and ENGL 102 Minimum Grade: D and ENGL 103 Minimum Grade: D ) or ENGL 105 Minimum Grade: D
Repeat Status: Not repeatable for credit

WRIT 310 - Literary Editing \& Publication
A course focusing on the techniques of editing, copyediting, proofreading, graphic selection and placement, the development of qualitative standards in manuscript selection for literary texts as well as connecting useful editorial/publication practice and social concerns in the fields of literary production.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):

Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

WRIT 312 - The Practice of Professional Writing
This seminar acquaints students with the broad spectrum of work in professional writing, including reading and discussion of assigned
research on various aspects of writing, and panel discussions with guest speakers, experienced professional writers and managers who work writers. Students research a writing-related field or topic.
Credits: 3.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
May not have the following Classification(s):
Freshman
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Not repeatable for credit

WRIT 400 - Writing in Cyberspace
Students explore the world of cyberspace, learning about cyberpunk, hyperfiction and the literary theory related to them, operating in a MOO, and developing a website for a specific audience. Students consider these online environments critically and reflect on their significance. No previous computer experience required.
Credits: 4.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
May not be enrolled in one of the following Program Level(s):
Continuing Education
May not have the following Classification(s):
Freshman
Sophomore
Repeat Status: Not repeatable for credit

WRIT 405 - Internship in Literary Publishing
Internship in Literary Publishing offers students practical experience in journal publication. One such example is Painted Bride Quarterly, which is produced both electronically and in print.
Credits: 2.00
College: Arts and Sciences
Department: English \& Philosophy
Restrictions:
Must be enrolled in one of the following Program Level(s):
Undergraduate Quarter
Pre-Requisites: ENGL 103 Minimum Grade: D or ENGL 105 Minimum
Grade: A
Repeat Status: Course can be repeated 3 time(s) for 6.00 credit(s)

