

**MUBZ M250 Music Marketing
& Promotion 3 crs.**

An in-depth study of the principles and application of marketing, promotion, and distribution of products and services within the music industry. Case studies of various music products and companies will be studied and analyzed.

**MUBZ M300 Music Merchandising
& Salesmanship 3 crs.**

A thorough study of the music products industry. Topics discussed include: manufacturing, distribution, wholesale, retail, and direct mail operations, financial planning, and analysis. Case studies of companies will be studied and analyzed.

**MUBZ M350 Music Management &
Concert Production 3 crs.**

A thorough study of how to successfully manage and administer an artist's career or music organization along with concert production. Topics discussed include: selection of artist and venue, organization and administration, back-timing, financial and legal issues, promotion sponsorship, and settlement. Case studies of successful managers and management companies as well as concerts will be studied and analyzed. Students will develop a written management plan for a musical artist or business and produce a concert.

**MUBZ M400 Music Business
Entrepreneurship 3 crs.**

A thorough study of how to successfully start a business within the music industry. Case studies of successful entrepreneurs and their companies will be researched and analyzed. Students will develop a written business plan for their own music business enterprise.

**MUBZ M450 Music Business Senior
Seminar 3 crs.**

Prepares students to undertake their internship by providing an in-depth study of how to prepare to successfully enter a career path.

**MUBZ M475 Music Business
Internship 3 crs.**

Students will complete a 15-week internship at a company in the music industry that offers a varied, practical, and challenging learning experience. A sponsor from the company and the chair of the music business program will supervise this internship.

MUSIC EDUCATION

Music

MUED M110 String Class I 1 cr.

This course offers the study of techniques leading toward basic performance competence and pedagogy of string instruments.

MUED M111 String Class II 1 cr.

This course is a continuation of String Class I.

**MUED M200 Field Experience in
Music Education 0 crs.**

This course offers the opportunity for observations of and participation in music instruction at various assigned levels (K – 12).

**MUED M210 Brass and
Percussion Class I 1 cr.**

This course is the study of techniques leading toward basic performance competence and pedagogy of brass and percussion instruments.

**MUED M211 Brass and
Percussion Class II 1 cr.**

This course is a continuation of Brass and Percussion Class I.

**MUED M250 Practicum in Music
Education 0 crs.**

This course is designed as the "shadow" teaching experience at the assigned student teaching site, the semester prior to student teaching.

**MUED M300 Student
Teaching Seminar 0 crs.**

This course is a symposium on student teaching—a free exchange of ideas, experiences, and problems relating to supervised teaching activities.

**MUED M306 Instrumental Music
Education Methods 3 crs.**

This course covers the organization and management of elementary and secondary school instrumental music programs emphasizing proven teaching techniques, materials, and performance procedures.

**MUED M307 Choral Music
Education Methods 3 crs.**

This course introduces the student to methods for teaching choral music. Emphasis is on management of performing ensembles, materials, teaching techniques, and literature.

**MUED M308 General Music
Education Methods 3 crs.**

This course covers organization and management of the elementary and middle school general music program emphasizing proven teaching techniques and materials based on a conceptual approach to music learning.

**MUED M309 Psychology of
Teaching Music in
Secondary Schools 3 crs.**

This course is an introduction to current theory and practice in music education including the psychology of learning and teaching music, nature and testing of musical aptitude and ability, and philosophy in music education.

MUED M310 Woodwind Class I 1 cr.
This course is the study of techniques leading to basic performance competence and pedagogy of woodwind instruments.

MUED M311 Woodwind Class II 1 cr.
This course is a continuation of Woodwind Class I.

MUED M400 Student Teaching 9 crs.
This course offers the student experience in secondary and/or elementary instruction under the guidance of music teachers and supervisors certified in the student's primary teaching area.

MUSIC HISTORY AND LITERATURE

Music

**MUHL M106 Introduction to
Music Literature 2 crs.**

This course is an introduction to fundamental musical concepts and terminology as applied to listening skills. Students will study a selected body of standard genres and styles used in western art music from c. 800 CE to the present.

**MUHL M306 History of Western
Art Music I 3 crs.**

This course is the first part of a two-semester survey of western art music, this semester covering music and ideas about music from antiquity to the mid-18th century. Where relevant, we will consider influences on western art music from other cultures and styles.

Prerequisites: MUHL M106 and MUTH M103, or permission of the instructor.

**MUHL M307 History of Western
Art Music II 3 crs.**

This course is the second part of a two-semester survey of western art music, this semester covering music and ideas about music from the mid-18th century to the present. Where relevant, we will consider influences on western art music from other cultures and styles.

Prerequisites: MUHL M306 and MUTH M202, or permission of the instructor.

MUHL M308 Piano Literature I 3 crs.

This course is a survey of standard keyboard music from the Baroque era to the present.
Prerequisite: MUHL M106 or permission of the instructor.

MUHL M309 Piano Literature II 3 crs.

This course is a continuation of Piano Literature I.
Prerequisite: MUHL M106 or permission of the instructor.

**MUHL M310 Evolution of
Jazz Styles 2 crs.**

Designed for Jazz Studies and music majors, this course covers the origin, phases, and most important performers in the development of jazz.

**MUHL M406 Topics in Music History:
1850 – present 2 crs.**

A seminar-style study of a single topic concerning music from Wagner to the present, usually focusing on some aspect of western art music but including consideration of influences from non-western and popular musics. Course may be repeated for credit, as long as topic is different.

Prerequisites: MUTH M203 and MUHL M307, or permission of instructor.

**MUHL M407 Topics in
Operatic Literature 2 crs.**

This is a seminar-style study of a single topic in the history of opera. Course may be repeated for credit, as long as topic is different.

Prerequisites: MUTH M203 and MUHL M307, or permission of instructor.

**MUHL M410 Orchestral
Literature 2 crs.**

This course is a survey of orchestral literature from the Baroque to the present including stylistic analysis of selected works.

Prerequisites: MUTH M203 and MUHL M307, or permission of instructor.

MUHL M411 Gregorian Chant 2 crs.

This course is an introduction to the official music of the Catholic Church, including reading the square notation, counting, conducting, and rehearsing.

Prerequisite: MUHL M307 or permission of instructor.

**MUHL M412 Music and
Ceremony in
Medieval Paris 2 crs.**

This is a consideration of how music works as one element of religious ceremony in medieval Paris. The course will focus on the four major religious institutions of 12th and 13th century Paris—the Cathedral of Notre-Dame, the Benedictine abbey of Saint Denis, the Augustinian house of Saint Victor, and the Sainte Chapelle in the royal palace—and how the arts reflect and are used to influence religious thought in this period.

Prerequisite: MUHL M307.

MUSIC—JAZZ STUDIES

Music

**MUJZ M107 Jazz Piano
and Theory 2 crs.**

This course is a study of the theory of jazz harmony, notation, and related functional piano skills. Ear training is also emphasized. This course is a prerequisite to Jazz Composition (MUTH M304) and Modern Arranging (MUTH M309).

MUJZ M108 Improvisation I 2 crs.

This course is an introduction to jazz improvisation with focus on melodic development for improvisation and ear training. Also explored are general performance practices and basic theory. Improvisation I is recommended as a prerequisite for MUTH M304 Jazz Composition and MUTH M309 Modern Arranging.

MUJZ M109 Improvisation II 2 crs.

This course is a continuation of Improvisation I. The focus is on chord/scale relationships as well as motivic development, ear training, and record transcriptions.

MUJZ M208 Improvisation III 2 crs.

This course is a continuation of Improvisation II with an emphasis on classic “standard tune” literature.

MUJZ M209 Improvisation IV 2 crs.
This course is a continuation of Improvisation III.

MUJZ M308 Improvisation V 2 crs.
This course is a continuation of Improvisation IV with an emphasis on “classics” composed by jazz artists.

MUJZ M309 Improvisation VI 2 crs.
This course is a continuation of Improvisation V with a final project consisting of transcriptions and biographical research into jazz artists on the student’s major instrument.

MUSIC— PEDAGOGY

Music

MUPD M110 Introduction to Piano Pedagogy I 2 crs.
This course is an introduction to basic pedagogical principles, general formats of material for beginning pianists, method books currently available, and basic studio policies. In addition to two class meetings each week, students will—during a 45-minute weekly group lesson—assist teachers in the Loyola music preparatory school.

MUPD M111 Introduction to Piano Pedagogy II 2 crs.
This course is a continuation of Introduction to Piano Pedagogy I.
Prerequisite: MUPD M110.

MUPD M210 Piano Pedagogy III: Elementary Methods and Materials 2 crs.
Students will learn elementary level literature. Playing this music in class, at performance level, is required. The pedagogical uses of these materials will be discussed. In addition to class meetings, students will observe private lessons as assigned (one hour weekly) in the preparatory department.
Prerequisite: MUPD M111.

MUPD M211 Piano Pedagogy IV: Intermediate Methods and Materials 2 crs.
This course is a continuation of Piano Pedagogy III at the intermediate level.
Prerequisite: MUPD M210.

MUPD M309 Guitar Pedagogy 3 crs.
This course is a survey of guitar method books, teaching techniques, and literature appropriate for use with beginning and intermediate level students. Areas covered include diagnosis of technical problems, lesson planning, and technical evaluation of the literature. Students participate in guitar instruction.

MUPD M310 Piano Pedagogy V: Supervised Teaching 1 cr.
Students will share, either with supervising teachers in the Loyola music preparatory school or another student, the teaching of group lessons. Students will meet weekly with course instructor to discuss the last class and present lesson. This course may be taken concurrently with Piano Pedagogy III.
Prerequisite: MUPD M211.

MUPD M311 Piano Pedagogy VI: Supervised Teaching 1 cr.
This course is a continuation of Piano Pedagogy V. It may be taken concurrently with Piano Pedagogy IV.
Prerequisite: MUPD M310.

MUPD M409 String Pedagogy 1 cr.
This course is an analysis of teaching materials and didactic approaches. Also covered is the minor maintenance of string instruments.

MUPD M410 Piano Pedagogy VII: Practicum 1 cr.
Each student will be apprenticed to a New Orleans area piano teacher as an assistant teacher with grades determined in consultation with each cooperating teacher. Observations will be made periodically by a member of the piano pedagogy faculty, in addition to those of the supervisory teacher.
Prerequisites: MUPD M311; junior standing.

**MUPD M411 Piano Pedagogy
VIII: Practicum 1 cr.**

This course is a continuation of Piano Pedagogy VII.

Prerequisite: MUPD M410.

MUSIC— PERFORMANCE

Music

PRIVATE INSTRUCTION

MUPR

M121 – 150 Applied Study 1 – 2 crs.

This course is a concentrated study of voice or a string, woodwind, brass, percussion, or keyboard instrument at the lower division level. Creditable as needed. Music majors and minors only.

**MUPR M300 Junior Recital/
Recital Appearance 0 crs.**

A full or partial recital is required of all candidates for the bachelor of music degrees in performance and jazz studies.

MUPR

M321 – 350 Applied Study 1 – 3 crs.

This course is a continuation of individual applied study at the upper division levels. Creditable as needed. Music students only.

MUPR M400 Senior Recital 0 crs.

A full individual recital is required of all candidates for the bachelor of music degrees in performance, jazz studies, piano pedagogy, and composition.

CLASS INSTRUCTION

MUPC M100 Recital Hour 0 crs.

Recital attendance is required of all undergraduate music majors throughout most semesters of residence. Creditable repeatedly.

**MUPC M101 Freshman
Voice Lab 0 crs.**

This is a workshop course for voice majors, offering musical study techniques to prepare for college-level voice lessons: how to practice wisely, how to memorize music quickly and effectively, and how to sing a successful jury exam.

Required for all freshman students whose principal instrument is voice.

**MUPC M110,
111, 210 Piano Class I – III
(Majors) 1 cr. each**

This is a sequence of courses leading toward basic performance competency and a knowledge of keyboard functional skills. Music students only.

**MUPC M115,
116, 215 Piano Class I – III
(Non majors) 1 cr. each**

These courses introduce the beginner to basic keyboard techniques and beginning literature.

**MUPC M120 Voice Class
(Majors) 1 cr.**

This course is a study of techniques leading toward basic performance competency in voice. Music students only.

**MUPC M125 Voice Class
(Non majors) 1 cr.**

This is a basic course in singing. Non-music majors only.

**MUPC
M130, 131 Guitar Class
(Non majors) 1 cr.**

This is a sequence of courses introducing the student to basic guitar techniques and literature. Non-music majors only.

**MUPC M300 Essentials
of Conducting 2 crs.**

This course offers basic conducting techniques—visual metric patterns, use of the baton, dynamic indications, cueing, rehearsal, and performance organization and application.

MUPC M301 Instrumental Conducting 2 crs.
This course is a continuation of Essentials of Conducting with emphasis on standard band and orchestral literature, rehearsal procedures, and historical styles.
Prerequisite: MUPC M300.

MUPC M302 Choral Conducting 2 crs.
This course is a continuation of Essentials of Conducting with emphasis on choral literature, rehearsal procedures, and historical styles.
Prerequisite: MUPC M300.

MUPC M400 Guitar Concepts I 1 cr.
Using classical form and posture, this course teaches fundamental reading and performance skills, with an emphasis on singing and playing together. Music majors only.

MUPC M401 Guitar Concepts II 1 cr.
This course is a continuation of Guitar Concepts I, adding barre chords and more finger patterns.
Music majors only or permission of instructor.

MUPC M402 Guitar Concepts III 1 cr.
Content varies with class.
Prerequisites: Guitar Class I – II for non-majors, or Guitar Concepts I – II, or permission of instructor.

ENSEMBLES

MUEN M100 – 105 Major Ensemble 1 cr.
Loyola Symphony Orchestra, Loyola Chamber Orchestra, University Band, University Chorale, University Chorus, Jazz Band I, Jazz Workshop Band, and Jazz Training Ensemble. These courses involve regular rehearsals and performances in groups of various sizes and constitutions. Creditable as needed at any level of undergraduate study. Open to non-music students by audition only.

MUEN M200 – 202 Minor Ensemble 1 cr.
Training Orchestra, Opera Workshop, and Vocal Chamber Ensemble. These courses involve regular rehearsals and performances in groups of various sizes and constitutions. Creditable as needed at any level of undergraduate study. Open to non-music students by audition only.

MUEN M300 – 310 Chamber Ensemble 1 cr.
String Ensemble, Woodwind Ensemble, Brass Ensemble, Percussion Ensemble, Jazz Combo, Guitar Ensemble, Clarinet Ensemble, Flute Ensemble, Saxophone Ensemble, Trombone Ensemble, and Piano Chamber Ensemble. These courses involve regular rehearsals and performances in groups of various sizes and constitutions. Creditable as needed at any level of undergraduate study. Open to non-music students by audition only.

MUEN M400 Accompanying 1 cr.
This course will provide the student with the opportunity to observe a professional accompanist at work in a close, advisory environment. The student will develop an understanding of some of the vocabulary, techniques, and concerns associated with accompanying the voice and a variety of instruments. Creditable as needed.

MUSIC THEORY

Music

MUTH M100 Elements of Music Theory 3 crs.
This course covers pitch and rhythmic notation, intervals, rhythmic and melodic music reading, and dictation. Open to non-music students.

MUTH M102 Theory I 4 crs.
This course covers theory rudiments and species counterpoint, with musicianship skills focused on aural perception of diatonic materials in the major mode.
Prerequisite: MUTH M100 or appropriate placement.

MUTH M103 Theory II 4 crs.

This course covers harmonic and contrapuntal processes in the context of Bach chorale style, including modulation, secondary dominant chords, and part-writing, with musicianship skills focused on aural perception of diatonic materials in the major and minor modes.

Prerequisite: MUTH M102.

MUTH M112 Music Notation Technologies 2 crs.

This course is a practical study of music notation with emphasis on the application of recent computer technology to traditional notational practice.

MUTH M202 Theory III 4 crs.

This course covers the harmonic syntax of the 19th century and small forms, including binary and ternary forms, with musicianship skills focused on aural perception of conventional chromatic techniques such as secondary dominants, Neapolitan sixth chords, and augmented sixth chords.

Prerequisite: MUTH M103.

MUTH M203 Theory IV 4 crs.

This course covers fugue, larger forms, including sonata form and rondo form, and 20th-century compositional techniques, with musicianship skills focused on aural perception of non-diatonic materials and exotic chromaticism.

Prerequisite: MUTH M202.

MUTH M210 Composition I 2 crs.

Private instruction in composition. Course content varies with the background and experience of the student. Instruction for many students covers simple homophonic compositions in small forms such as binary form and ternary form.

Prerequisites: MUTH M102, M103.

MUTH M211 Composition II 2 crs.

Private instruction in composition. Course content varies with the background and experience of the student. Instruction for many students covers simple polyphonic devices such as canon, and short compositions with texts.

Prerequisite: MUTH M210.

MUTH M302 Counterpoint I 2 crs.

This course covers writing and analysis of vocal music in the style of the late Renaissance.

MUTH M303 Counterpoint II 2 crs.

This course covers writing and analysis of instrumental and vocal music in the style of the late Baroque.

MUTH M304 Jazz Composition 2 crs.

This course is the study of jazz composition and arranging with the emphasis on writing for small groups.

Prerequisites: MUJZ M107, M108, or permission of instructor.

MUTH M306 Orchestration I 2 crs.

This course is a study of the capabilities and limitations of the band and orchestral string, wind, and percussion instruments.

Prerequisite: MUTH M202.

MUTH M307 Orchestration II 2 crs.

This course is the study of the history of orchestration procedures from the mid-Baroque era to the present. The relationship of orchestration to formal processes and musical aesthetics will be emphasized.

Prerequisite: MUTH M306.

MUTH M308 Commercial Arranging 2 crs.

This course will explore the basic concepts of arranging popular music for commercial use. Topics include arranging for rhythm section, small combos, solo instruments, and voice.

MUTH M309 Modern Arranging 2 crs.

Modern Arranging is designed to introduce students to the techniques and practices of large ensemble (big band) jazz arranging. Ranges, transpositions, and the properties of the more commonly used instruments, theory, voicing principles, reharmonization, orchestration, and the organization of an arrangement are studied. A final project is a short arrangement for big band, which will be performed and recorded by Jazz Band I.

Prerequisite: MUJZ M107.

MUTH M310 Composition III 2 crs.

Private instruction in composition. Course content varies with background and experience of the student. Instruction for many students covers problems of larger forms such as variation form or rondo form, and writing for a variety of instrumental combinations.

Prerequisite: MUTH M211.

MUTH M311 Composition IV 2 crs.

Private instruction in composition. Course content varies with the background and experience of the student. Instruction for many students covers problems of larger forms such as sonata form, and writing for a variety of instrumental combinations.

Prerequisite: MUTH M310.

MUTH M402 Form and Analysis I 2 crs.

This course is a formal and harmonic analysis of fugue and musical works from the classical through post-romantic periods.

Prerequisite: MUTH M203.

MUTH M403 Form and Analysis II 2 crs.

This course covers analysis of 20th-century music and Schenkerian analysis of tonal music.

Prerequisite: MUTH M203.

MUTH M410 Composition V 2 crs.

Private instruction in composition. Course content varies with the background and experience of the student. Instruction is focused on preparation of a senior recital of original compositions in a variety of media.

Prerequisite: MUTH M311.

MUTH M411 Composition VI 2 crs.

Private instruction in composition. Course content varies with the background and experience of the student. Instruction is focused on preparation of a senior recital of original compositions in a variety of media.

Prerequisite: MUTH M410.

MUTH M420 Topics in Music Theory 3 crs.

A seminar-style study of a single analytical technique, such as Schenkerian analysis or pitch-class set theory, or analytical survey of a particular body of literature, such as the Classical string quartet or 20th-century sacred music for chorus and orchestra.

MUSIC THERAPY

Music

MUTY M100 Introduction and Definition 2 crs.

This course introduces the student to the principles upon which the profession of music therapy is founded.

MUTY M101 Physical Disabilities 2 crs.

This course is an in-depth look at music therapy with physical handicaps, speech, visual, and hearing difficulties in the medical setting. There will be a strong experiential component, in an effort to practice some of the concepts presented in class.

MUTY M117 Field Studies I 1 cr.

This course offers practicum experience in the field. This course is a minimum of two hours in the field with clients and an additional one hour per week seminar.

MUTY M200 Mental Retardation and Exceptionality 2 crs.

This course is an overview of music therapy theory, research, and clinical practice with mental retardation and autism. In addition to the review of literature, this course will have a strong experiential component, in an effort to practice some of the concepts presented in class.

MUTY M201 Childhood Disorders 2 crs.

This course is an overview of music therapy theory, research, and clinical practice in learning disabilities and child and adolescent disorders. In addition to the review of the literature, this course will have a strong experiential component, in an effort to practice some of the concepts learned in class.

MUTY M217 Field Studies II 1 cr.
This course offers practicum experience in the field. This course is a minimum of two hours in the field with clients and an additional one hour per week seminar.

MUTY M300 Gerontology 2 crs.
This course is an overview of music therapy theory, research, and clinical practice in work with geriatrics. This course will have a strong experimental component.

MUTY M301 Adult Disorders 2 crs.
This course is an overview of music therapy theory, research, and clinical practice in psychiatry. A study of the disabilities in adult treatment will be explored. This course will have a strong experiential component, in an effort to practice music therapy techniques learned in class.

MUTY M317 Fields Studies III 1 cr.
This course offers practicum experience in the field. This course is a minimum of two hours in the field with clients and an additional one hour per week seminar.

MUTY M400 Acoustics and Physiological Responses 2 crs.
This course provides an overview of acoustics and physiological responses to music. Topics covered are basic acoustics and the anatomy of the human ear. Research trends in physiological responses to music will be investigated. The course will also contain an experiential component to practice music therapy concepts.

MUTY M401 Affective and Perceptual Responses 2 crs.
This course is an in-depth examination of affective and perceptual responses to music. It is also an exploration of improvisational models in music therapy. This course will have a strong experiential component, in an effort to practice music therapy techniques learned in class.

MUTY M417 Fields Studies IV 1 cr.
This course offers practicum experience in the field. This course is a minimum of two hours in the field with clients and an additional one hour per week seminar.

MUTY M497 Music Therapy Internship 1 – 7 crs.
Internship requires a minimum of 900 clock hours of uninterrupted service at an AMTA approved clinical setting, commencing at the completion of other coursework.

NAVAL SCIENCE

Arts and Sciences

NAVS D101 Introduction to Naval Science 3 crs.
A general introduction to the Navy and Marine Corps. The instruction places particular emphasis on the mission, organization, regulations, and broad warfare components of the Navy. Included is an overview of officer and enlisted rank and rating structures, the basic tenets of naval courtesy and customs, discipline, Navy core values, naval leadership, and ship's nomenclature. The course also provides a conceptual framework/working vocabulary for NROTC students to use on Summer Cruise. The student is made cognizant of the major challenges facing today's naval officer.

NAVS D102 Seapower and Maritime Affairs 3 crs.
Designed to develop the student's knowledge and interest in sea power and maritime affairs, this course is oriented towards the influence of sea power upon history and the implementation of sea power as an instrument of national policy. The survey begins with the age of galley warfare and concludes with an analysis of current military operations.

NAVS D200 Leadership and Management 3 crs.

Comprehensive study of organizational behavior and management. Topics include survey of management functions of planning, organizing, and controlling; an introduction to individual/group behavior in organizations; and extensive study of motivation/leadership. Major behavior theories explored in detail. Practical applications explored through using experiential exercises, case studies, and laboratory discussions. Other topics include decision making, communication, responsibility, authority, accountability, and total quality leadership.

NAVS D201 Naval Ships Systems I 3 crs.

An introduction to the principles of ship design and operation. Ship stability, structure, main propulsion system, and auxiliary subsystems are carefully examined with emphasis on the interdependency of the subsystems which comprise the overall ship system.

NAVS D301 Navigation I 3 crs.

A comprehensive study designed to introduce the theory and practical applications of marine navigation. Topics include an understanding of the marine environment, terrestrial and celestial navigation theory, navigational equipment, visual navigation theory.

NAVS D302 Navigation II 3 crs.

A comprehensive study of relative motion, vector-analysis theory, formation tactics, and ship employment. Also included are introductions to naval operations and operations analysis, ships behavior and characteristics in maneuvering, applied aspects of shiphandling, afloat communications, and command and control.

NAVS D303 Evolution of Warfare 3 crs.

This course traces the development of warfare from the dawn of recorded history to present, focusing on the impact of major military theorists, strategists, tacticians, and technological developments. Students acquire a basic sense of strategy, develop an understanding of military alternatives, and see the impact of historical precedence on military thought and actions. This course concludes with a review of the various modern warfare concepts and principles outlined in the National Command Authorities Joint Vision 2010, and briefly explores the future of armed conflict.

NAVS D401 Naval Ships Systems II 3 crs.

This course provides an introduction to theory and principles of operation of naval weapons systems. It includes coverage of types of weapons and fire control systems, capabilities and limitations, theory of target acquisition, identification and tracking, trajectory principles, and basics of naval ordinance.

NAVS D402 Leadership and Ethics 3 crs.

Completes final preparations of NROTC ensigns/2nd Lieutenants for their first fleet assignments as division officers or platoon commanders. Topics of discussion include: military leadership, values/professional ethics; the uniform code of military justice and Navy regulations emphasizing Navy/Marine Corps junior officer's typical application of law; and separate discussions of Navy and Marine Corps personnel policies and practices relating to the roles of enlisted members, junior and senior officers, personnel counseling, evaluation, advancement, career planning, personal finances, drug and alcohol abuse, fraternization and sexual harassment, and reporting aboard to their first command.

NAVS D403 Amphibious Warfare 3 crs.

This course surveys the historical development of amphibious doctrine and the conduct of amphibious operations. Emphasis is placed on the evolution of amphibious warfare in the 20th century, especially during World War II. The course explores present day capabilities, limitations, and force structure of current amphibious forces, and establishes a foundation for understanding the future of littoral warfare.

NURSING

City College

NURS C361 Professional Nursing Practice 3 crs.

This course is designed to facilitate the transition of the student to the role of the B.S.N.-prepared professional nurse. Emphasis is placed on nursing as a professional practice discipline with emphasis on legal and ethical dimensions of professional nursing practice, nursing roles, selected nursing theories, and the evolution of nursing's knowledge base.

NURS C365 Health Assessment 4 crs.

This course has both theory and practicum components. The emphasis of the course is on providing the student with tools of assessment to appraise the health of individuals. Knowledge from the biological sciences is used within the context of the nursing process to develop skill in systematic assessment of clients in all phases of the life cycle.

NURS C371 Legal, Ethical, and Political Issues in Nursing 3 crs.

This course introduces students to basic legal, ethical, and political concepts and issues influencing the health care system. Emphasis is placed on laws, policies, and ethical principles which govern professional nursing practice.

NURS C377 Nursing Leadership Theory 3 crs.

This course focuses on the leadership role in professional nursing practice. Emphasis is on principles and practices related to change, decision-making, advanced communication, authority and power, bureaucratic structures, and modes of organizing client care. Focus is on the nursing role of leader/manager in a variety of health care settings.

Prerequisite: NURS C361.

NURS C450 Nursing Research Theory 3 crs.

This course is an introduction to nursing research. Emphasis is placed on understanding quantitative and qualitative approaches to the research process and on critiquing nursing research articles for the purpose of evaluating applicability to nursing practice.

Prerequisites: NURS C361; statistics.

NURS C457 Health Promotion Theory 3 crs.

This course focuses on the nursing role in health promotion and disease prevention as it impacts the entire life cycle. Analysis of the family unit is explored as it relates to the individual's health, as well as the development of health beliefs and health behaviors. Health education techniques and strategies for behavioral change are explored.

Prerequisite: NURS C361.

NURS C468 Advanced Topics in Nursing Practice 3 crs.

This course focuses on practice issues in areas of students' special interest (e.g., nursing of children, maternity nursing, school health, primary care nursing, self-care nursing).

NURS C471 Community Health 3 crs.

This course focuses on community health care services with emphasis on community health assessment. Emphasis will be placed on the nurse's role in improving the health of communities. Nursing care of individuals, families, groups, and aggregates are addressed within the conceptual framework of the community.

Prerequisite: NURS C361.

NURS C473 Comprehensive Integrated Practicum 4 crs.

This practicum course integrates theoretical learning related to nursing leadership and management skills needed to address health problems within a specific aggregate. Health promotion, risk reduction, and illness and disease management strategies are emphasized. Leadership and project management skills are incorporated with an emphasis on cost and quality outcomes.

Pre/Co-requisites: NURS C377, C457, C471.

ORGANIZATIONAL BEHAVIOR

City College

ORGB C100 Introduction to Organizational Behavior 3 crs.

This course is an examination of the sociological and psychological mechanisms that account for the independent structure and functioning of highly specialized and differentiated occupational groups and formal organizations.

ORGB C260 Elementary Statistics 3 crs.

This course is intended to provide a foundation in applied statistics for students ready to move into research courses and in need of these statistical tools.

ORGB C265 Communication in Organizations 3 crs.

This is a course in the fundamental principles of communicating in business and professional situations. Emphasis is placed on interviewing, group discussion, and public speaking—including audience analysis, speech composition, and delivery and effective use of audiovisual aids.

ORGB C360 Research Methods 3 crs.

Data collection, reduction, and analysis are covered for the major forms of research used in the behavioral and social sciences. Experimental analysis, control group designs, and survey research are given equal weight. Tests and measurements and computer applications are mentioned.

Prerequisite: ORGB C260.

ORGB C365 Program Planning and Evaluation 3 crs.

The course examines how social research contributes to effective policy making and evaluation. Topics covered include conceptual, methodological, bureaucratic, political, and organizational factors hindering sound evaluation in addition to specific research techniques used in program evaluation.

Prerequisites: ORGB C260, C360.

ORGB C375 Community Change and Development 3 crs.

This course will draw upon interdisciplinary studies related to communities and community change and will explore strategies that professionals and citizens may use to bring a variety of community groups and organizations into collaborative efforts to effect change in health care, homelessness, housing, education, and other issues affecting the common good.

ORGB C496 Seminar in Organizational Development 3 crs.

This capstone course in the Human and Organizational Development program provides a survey of professional ethical issues related to organizational interventions, along with experiential learning that employs the key skill areas of the program. It is also designed to assist majors in developing a personal career plan.

Prerequisites: senior standing; permission of instructor.

PHILOSOPHY

Arts and Sciences

PHIL A201 Practical Logic 3 crs.

This course will introduce the student to the application of practical logical techniques in the analysis and formulation of rational arguments. Topics will include how to find premises and conclusions in an argument, definitions, informal fallacies, syllogisms, Venn diagrams, induction, Mill's methods, etc.

Prerequisite: PHIL T122.

PHIL A206 Introduction to Symbolic Logic 3 crs.

This course is an introduction to the techniques of symbolic logic in argument analysis and to the science of logic as the analysis of formal deductive systems.

Prerequisite: PHIL T122.

PHIL A210 Metaphysics 3 crs.

This course is a historical and theoretical examination of the question, "What does it mean to be?" or "What is reality, as distinct from mere appearance?" The course begins with a study of ancient philosophical explanations of reality and goes on to study the historical evolution of both the problem of metaphysics and its various resolutions.

Prerequisite: PHIL T122.

PHIL A215 Ethics 3 crs.

This course is a historical and problematic investigation of traditional ethical positions and texts, especially focusing on teleological and deontological theories and on contemporary responses to them.

Prerequisite: PHIL T122.

PHIL A220 Epistemology 3 crs.

This course takes a historical and problematic approach to the problems of knowledge, with emphasis on various individual responses to key issues, such as perception, truth, meaning, universals, induction, a priori knowledge, etc.

Prerequisite: PHIL T122.

PHIL A225 Philosophy of Law 3 crs.

This course is an inquiry into the nature of law, the relevance of law to morality, the concepts of responsibility in the law, punishment, and the relevance to law of the concepts of justice, equality, and liberty. The philosophical assumptions that underlie criminal law and private law will be explored. Readings from classical and recent philosophers of law.

PHIL A300 Philosophy of Science 3 crs.

This course is an introduction to basic themes of recent philosophy of science including scientific methodology, concepts and presuppositions. Through an examination of different models of scientific explanation, the course will expose the student to problems of inductive reasoning, status of observations, laws, theories, theoretical entities, and scientific revolutions.

Prerequisite: PHIL T122.

PHIL A307 Philosophy of Mind 3 crs.

This course examines different theories of the nature of mind. It begins with an examination of the traditional mind-body problem in the works of Descartes. It will subsequently explore alternative positions which have been presented by Descartes' contemporaries in the classical period, as well as contemporaries of our own. Emphasis will be placed on such areas as mind-body identity/interaction, brain process, language, perception, sensation, emotion, personal identity, and free will.

Prerequisite: PHIL T122.

PHIL A315 Philosophy of History 3 crs.

This course is a consideration of the problems of knowledge in history, including the problems of the nature of history, historical truth, explanation, and objectivity. Also considered are some of the principal general theories of historical development.

Prerequisite: PHIL T122.

**PHIL A320 Social and Political
Philosophy 3 crs.**

This course is an inquiry into the origin, nature, and necessity of political order. The relation of the individual to the social and political whole, the origin, nature, and just use of political authority, the nature of rights and duty, the problem of freedom, and the philosophical prerequisites of a just social order will be treated.

Prerequisite: PHIL T122.

PHIL A340 Being and God 3 crs.

This course is a philosophical reflection on the questions of the existence of God, his nature and his relationship to the world in the light of the metaphysics of being. Included are readings which are pro and con on important positions with discussion.

Prerequisite: PHIL T122.

**PHIL A350 Philosophy
of Person 3 crs.**

The four questions of freedom and determinism, individuality and sociality, mind-body unity, and immortality are considered from the perspectives of naturalism, existentialism, substance, and process. Each student writes tentative position papers on these questions with a personal overall philosophical perspective.

Prerequisite: PHIL T122.

**PHIL A400 History of Ancient
Philosophy 3 crs.**

The Pre-Socratics, Plato, Aristotle, the Epicurians, Sceptics, Stoics, Plotinus, and early Christian thought are discussed.

Prerequisite: PHIL T122.

**PHIL A405 Survey of Medieval
Philosophy 3 crs.**

Historical study of the main ideas of the medieval period from St. Augustine to the Renaissance.

Prerequisite: PHIL T122.

**PHIL A410 History of
Modern European
Philosophy 3 crs.**

This course will discuss readings from works of Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant.

**PHIL A416 History of
Nineteenth-century
Philosophy 3 crs.**

A survey of the major traditions in post-Kantian philosophy ending with Nietzsche, the course will explore the interrelations between different themes in 19th-century thought and how they laid foundation for 20th-century philosophy.

Prerequisite: PHIL T122.

**PHIL A430 American
Philosophy 3 crs.**

This course is a study of the philosophies of Pierce, James, Dewey, Royce, Santayana, Mead, Lewis, and Whitehead, with emphasis on the emergence of classical American philosophy as a response to philosophic, social, and scientific developments.

Prerequisite: PHIL T122.

PHIL A435 Existentialism 3 crs.

This course examines the treatment of the characteristic existentialistic themes as exemplified in the writings of Kierkegaard, Nietzsche, Heidegger, Jaspers, Marcel, and Sartre.

Prerequisite: PHIL T122.

PHIL A440 Phenomenology 3 crs.

This course treats the problems which gave rise to contemporary phenomenology and some of the main figures—Husserl, Scheler, Heidegger, Merleau-Ponty, Sartre, and Ricoeur.

Prerequisite: PHIL T122.

**PHIL A455 Marx and
Technology 3 crs.**

This course is an examination of Marx's theory in the light of contemporary technology and an evaluation of technology in terms of Marxian theory.

Prerequisite: PHIL T122.

**PHIL A465 Introduction to
Analytic Philosophy 3 crs.**

This course is a study of the rise of contemporary Anglo-American analytic philosophy as practiced through the methods of logical and linguistic analysis.

Prerequisite: PHIL T122.

PHIL A493 Seminar: Major Author 3 crs.

This course is an in-depth analysis of the thought of a major philosopher. Content varies.

Prerequisite: permission of instructor.

PHIL A495 Special Project arr.

This project focuses on the creative or productive efforts of one or more students. A special project is distinguished from a research project in its lack of the historical or experimental method and perspective characteristics of research.

PHIL A496 Seminar/Workshop arr.

A seminar is a supervised group of students sharing the results of their research on a common topic. A workshop is a supervised group of students participating in a common effort.

PHIL A498 Position Paper Seminar 3 crs.

Every week each seminar member writes a two-page paper expressing his/her tentative position on a major question from the philosophy of person, knowledge, conduct, and God. The papers are discussed with other seminar members and the director, then unified in a final synthesis paper on which the student is examined orally by three philosophy teachers.

PHIL A499 Independent Study arr.

PHIL H233 Honors Philosophy I: Ethics 3 crs.

Common Curriculum: University Honors Program

This course examines questions in ethics. The student will be introduced to philosophical inquiry through an investigation of basic ethical questions. The course will include some reading of primary texts and the examination of some contemporary ethical problems.

PHIL H234 Honors Philosophy II: Metaphysics 3 crs.

Common Curriculum: University Honors Program

This course examines questions in metaphysics. It will include a historical and theoretical examination of such questions as “What does it mean to be?” and “What is reality, as distinct from mere appearance?”

PHIL H235 Honors Philosophy III: Epistemology 3 crs.

Common Curriculum: University Honors Program

This course examines questions in the theory of knowledge. Involved is an intensive examination of basic issues concerning the foundations and justification of human knowledge, with a focus on such topics as perception, truth, and meaning.

PHIL H236 Honors Philosophy—Scientific Revolutions 3 crs.

The philosophical analysis of natural science has developed, in the past 40 years, from a field dominated by a single “received view” to an arena of volatile debate with no single dominant contender for an acceptable model of scientific knowledge. This course examines the somewhat chaotic present state of this pivotal debate in late 20th-century intellectual history and its implications for basic questions regarding knowledge, reality, and both cognitive and social values.

Students may not receive credit for both this course and PHIL V164, Scientific Revolutions.

PHIL T122 Introduction to Philosophy 3 crs.

Common Curriculum: Introductory

This course will introduce the student to philosophy through a consideration of selected fundamental questions of ethics, epistemology, and metaphysics, as seen in the thoughts and writings of significant philosophers.

PHIL U130 Aesthetics 3 crs.

Common Curriculum: Humanities/Arts Pre-modern

This course offers an introduction to the major issues of aesthetics. Topics for consideration include: a brief survey of the history of art, the nature of art, the nature of beauty, the criterion for aesthetic goodness, the interpretation of artwork, metaphor and representation in art, and the aesthetic experience.

Prerequisite: PHIL T122.

PHIL U137 Indian Philosophy 3 crs.

Common Curriculum: Humanities/Arts Pre-modern

A survey of philosophical traditions of India. This course is designed to help the student to extend his/her knowledge to the wisdom of the East. The study includes the philosophies of the Vedas, Upanisads, Buddhism, Jainism, Mimamsa, Nyaya, Vaisesika, Sankhya, Yoga, Vedanta, Bhagavadgita, and of some contemporary thinkers as Aurobindo, Vivekananda, Tagore, Gandhi, and Radhakrishnan.

Prerequisite: PHIL T122.

PHIL U138 Philosophy and Literature 3 crs.

Common Curriculum: Humanities/Arts Pre-modern

This course acquaints students with the multifarious relationship between philosophy and literature as staged in some seminal texts of philosophy. The course also demonstrates that (the definition of) literature has often been inscribed in philosophical frameworks by tracing some concepts (metaphor, work, text, author) central to both philosophy and literature/literary theory.

PHIL U139 Divine Madness 3 crs.

Common Curriculum: Humanities/Arts Pre-modern

This course is an exploration of the relationship among philosophy, mysticism, and madness following the theme of theosis (divine madness) introduced by Plato through a selective reading of the history of philosophy, Christian mysticism, and modern psychology.

PHIL U154 Postmodernism and Feminism 3 crs.

Common Curriculum: Humanities/Arts Pre-modern

Masculinity and femininity are no longer accepted as fixed positions within ontologies mapped out by man's objectifying look. Postmodernist deconstruction of traditional engendered representations discloses the exchangeability of genders and thus works toward a liberation of the "engendered subject" in the multitudinous affinities between beings.

Prerequisites: PHIL T122, ENGL T122.

PHIL U158 Philosophical Anthropology 3 crs.

Common Curriculum: Humanities/Arts Pre-modern

This course acquaints students with basic issues in the philosophy of human nature, such as slavery, property, equality, the individual and the state, and the individual and God. It also teaches students to think critically and constructively about philosophies of human nature by drawing out the implications of basic statements about the nature of human beings.

Prerequisite: PHIL T122.

PHIL U160 Worldviews and Ethics 3 crs.

Common Curriculum: Humanities/Arts Pre-modern

Our morality cannot be divorced from our understanding of reality. This course will explore how our view of reality affects our moral judgments by examining the worldviews and moralities of both the ancient Greeks and subsequent Christian philosophers. Readings will be taken from Homer, Plato, Aristotle, Augustine, and Aquinas.

Prerequisite: PHIL T122.

**PHIL U162 Classics in
Moral Literature 3 crs.**

Common Curriculum: Humanities/Arts Pre-modern

This course is a study of classics that reflect the gradual transformation of moral consciousness in antiquity, including readings from Plato and Aristotle. The implications of ancient moral thought and its abandonment by modernity will be examined in two classics of modern moral literature, one from Kant and the other from Nietzsche.

Prerequisite: PHIL T122.

PHIL V134 Medical Ethics 3 crs.

Common Curriculum: Humanities/Arts Modern

After a brief introduction to some basic principles useful in moral decision making, the course introduces the student to problems of general interest in bioethics such as: lying and confidentiality, suicide and the refusal of lifesaving treatment, euthanasia and care of the dying, abortion, experimentation on humans, moral problems surrounding AIDs, etc.

Prerequisite: PHIL T122.

**PHIL V135 Philosophy
of Right 3 crs.**

Common Curriculum: Humanities/Arts Modern

This course is a philosophical expose of the life, struggles, death, and ultimate transformation of the concept of "right." The central issue of the course: Is the violation of a human right a crime against nature?

Prerequisite: PHIL T122.

**PHIL V140 European
World Views 3 crs.**

Common Curriculum: Humanities/Arts Modern

This course attempts to clarify the philosophical framework underlying contemporary thought, expression, and science in contrast to the framework of the modern period of philosophy (17th – 18th centuries) by investigating four or five contemporary European philosophers such as Kierkegaard, Nietzsche, Marcel, Heidegger, Merleau-Ponty, and Sartre.

Prerequisite: PHIL T122.

**PHIL V141 Philosophical
Perspective
on Woman 3 crs.**

Common Curriculum: Humanities/Arts Modern

This course covers the philosophical development of three feminist theories—liberal, Marxist, and radical feminism. Various philosophical frameworks that have served as the basis of feminist critiques, such as positivism, liberalism, Marxism, functionalism, existentialism, and Freudism are discussed. Students will address critically a number of women's issues, including women's self-concept, their biology, their place in the public sphere, and their representation in language and culture.

Prerequisite: PHIL T122.

**PHIL V143 Environmental
Philosophy 3 crs.**

Common Curriculum; Humanities/Arts Modern

This course offers an overview of the environmental crisis and evaluates the leading contemporary philosophical accounts of both the origins of the crisis and the ethical orientations needed for its resolution.

PHIL V144 Philosophy of Law 3 crs.

Common Curriculum: Humanities/Arts Modern

This course examines ethical principles as they bear on disputed legal issues such as capital punishment, equal protection, school integration, affirmative action, and welfare/taxation/economic justice.

Prerequisite: PHIL T122.

PHIL V150 Relativism 3 crs.

Common Curriculum: Humanities/Arts Modern

This course introduces the student to the nature of both moral and cognitive relativism. We will analyze the cultural factors motivating relativism, the arguments for and against various relativist positions and their implications for human knowledge and values in readings from the Greek Sophists to contemporary philosophy of science.

Prerequisite: PHIL T122.

PHIL V152 Making Moral Decisions 3 crs.

Common Curriculum: Humanities/Arts Modern

This course is an account of the nature of morality as social institution and philosophical interpretations of it, e.g., varieties of utilitarianism, deontology, and natural law applied to contemporary moral problems.

Prerequisite: PHIL T122.

PHIL V164 Scientific Revolutions 3 crs.

Common Curriculum: Humanities/Arts Modern

The reasoning and values used by scientists will be analyzed in those major shifts of scientific beliefs known as scientific revolutions. We will discuss Thomas Kuhn's paradigm model of science and the debate it has provoked over rationality, reality, and progress in science and human culture.

Prerequisite: PHIL T122.

PHIL V170 Philosophy of Knowledge 3 crs.

Common Curriculum: Humanities/Arts Modern

This course is a philosophic examination of origin and nature of human knowledge, with a focus on diversity of philosophic perspectives which have been utilized for such an examination, the problems arising within and insights offered by each perspective, and the interrelationships among the various perspectives. Topics include meaning, truth, and sensation.

Prerequisite: PHIL T122.

PHIL V173 Auschwitz and After 3 crs.

Common Curriculum: Humanities/Arts Modern

The annihilation of six million European Jews by the Nazi totalitarian state constitutes the subject matter of the course. After exploring the history of anti-semitism and the Nazi destruction process, the course turns to the ethical, religious, and philosophical dilemma posed by this mass murder.

Prerequisite: PHIL T122.

PHIL V177 Minds and Machines 3 crs.

Common Curriculum: Humanities/Arts Modern

This is an intermediate course in philosophy which focuses on the structures and nature of human consciousness. It will serve as an introduction to contemporary discussion and issues associated with the philosophy of mind. Criteria for determining the nature and structure of consciousness will be developed through models employed in computers by artificial intelligence programs. No computer experience is required for this course.

Prerequisite: PHIL T122.

PHIL V178 Philosophy of God 3 crs.

Common Curriculum: Humanities/Arts Modern

This course will treat the existence and the nature of God according to the philosophies of Kant, Anselm, Aquinas, and Whitehead. Among the topics of discussion will be: atheism, agnosticism, theism, and the process philosophy.

Prerequisite: PHIL T122.

PHIL V180 Freedom and Oppression 3 crs.

Common Curriculum: Humanities/Arts Modern

This course covers the conceptual relationship of freedom and oppression, how the philosophical limits of the former determine our understanding of the latter and hence, our ability to resolve the problems of oppression. Readings in Marx, Skinner, and Camus will disclose the three major conceptions of freedom presupposed in actions and concerns of modern humans. *Prerequisite: PHIL T122.*

PHIL V186 Religious Experience and Philosophy 3 crs.

Common Curriculum: Humanities/Arts Modern

Accounts of religious experience unfold their fundamental meaning and structures in relation to those of human experience in general. Students will come to understand explicitly the nature, limits and implications, and the foundations in existence of religious experience.

PHIL V198 Ethics of Sex/Marriage 3 crs.

Common Curriculum: Humanities/Arts Modern

This course is an examination of ethical issues of gender (woman's nature/man's nature/normative implications); sex (interpretations of sex and norms for sexual conduct); marriage (traditional monogamy vs. alternatives); family (right/duty to procreate); obligations of parents; population control, abortion, infanticide, and reproductive technologies.

Prerequisite: PHIL T122.

City College

PHIL C122 Introduction to Philosophy 3 crs.

This course will introduce the student to philosophy through a consideration of selected fundamental questions and methodologies as seen in the thoughts and writings of significant philosophers.

PHIL C269 Bioethics 3 crs.

This course is a study of the ways in which the principles of moral decision-making can be applied to such moral issues as abortion, euthanasia, defective newborns, death, dying, experimentation on humans and animals, placebos, genetic engineering, behavior modification, cloning, interpretations of health and disease, and the allocation of social resources.

PHIL C364 Moral Decisions 3 crs.

This course is an examination of such questions as: What is good and what is evil? Which actions are right and which actions are wrong? Are people morally responsible? Contemporary moral issues such as abortion, capital punishment, sexual equality, discrimination, sexual integrity, pornography, economic injustice, and ecological responsibility are treated in the light of major ethical theories.

PHIL C366 Technology and Human Values 3 crs.

A study of the relationships between technology, social change, and human values, this course includes analyses of several visions of the promises and threats of technology and a survey of the history of technology. Other topics include human nature, freedom, the impact of technology upon nature, and alternative technologies.

PHIL C368 Environmental Ethics 3 crs.

This course is an exploration of the developing fields of environmental ethics. Topics include issues and concepts in environmental ethics (including the animal rights debate); individualistic and holistic theories; views of major ecophilosophies on environmental issues, ecological crisis, and human responsibilities toward nature.

**PHIL C369 Environmental
Philosophy 3 crs.**

The goal of this course is to help the student reflect on the concepts of nature, ecology, and environment, and on the relationship between the person, humanity, and the natural world. We investigate concepts of nature and of humanity's place in nature in Western thought, in Eastern traditions and in indigenous cultures. We also examine the role of images and conceptions of nature in the history of social, political, and economic institutions, and discuss the ways in which views of nature may perform both ideological and liberatory functions.

PHIL C463 Eastern Philosophy 3 crs.

This course is an introduction to major traditions in Asian philosophy. Philosophies studied include Vedanta, Confucianism, Daoism, Theravada Buddhism, Mahayana Buddhism, and Zen.

PHYSICS

Arts and Sciences

PHYS A110 Basic Physics I 4 crs.

This is an introductory course in physics intended for students whose majors are chemistry, math, physics, or pre-engineering. Three lectures and one review are included per week.

Prerequisite: MATH A257 or co-registration in MATH A257.

Co-requisite: PHYS A112.

PHYS A111 Basic Physics II 4 crs.

Same description as PHYS A110.

Prerequisites: PHYS A110, MATH A258 or co-registration in MATH A258.

Co-requisite: PHYS A113.

PHYS A112 Physics Lab I 1 cr.

Co-requisite: PHYS A110 or PHYS A115.

PHYS A113 Physics Lab II 1 cr.

Co-requisite: PHYS A111 or PHYS A116.

PHYS A115 General Physics I 3 crs.

The principles of mechanics, heat, sound, light, magnetism, electricity, and fundamentals of atomic physics. In presenting these topics, the special interest of the biological sciences and the general education groups are kept in view. Included are three lectures per week.

Prerequisite: MATH A257 or co-registration in MATH A257.

Co-requisite: PHYS A112.

PHYS A116 General Physics II 3 crs.

Same description as PHYS A115.

Prerequisites: PHYS A115, MATH A258 or co-requisite in MATH A258.

Co-requisite: PHYS A113.

**PHYS A117 Mathematical
Physics I 3 crs.**

This is a first-year introduction to the techniques of mathematical physics involving real and complex vectors, matrices, and the algebra of linear operators as applied to actual problems in the areas of classical, relativistic, and quantum physics. (With departmental approval, equivalent mathematical sciences courses may be substituted.)

Prerequisites: PHYS A110, MATH A257.

PHYS A195 Special Projects I 1 cr.

**PHYS A220 Electromagnetic
Theory I 3 crs.**

This course concerns detailed development and application of the laws of electromagnetism and an introduction to vector calculus. Applications of Maxwell's equations are covered including plane waves, reflection and refraction, and radiation.

Prerequisites: PHYS A110, A111, MATH A257, A258, A259.

**PHYS A225 Electromagnetic
Theory II 3 crs.**

Same description as PHYS A220.

PHYS A228 Quantum Topics 3 crs.

This course is an introduction to the basic physical theories governing the atomic, nuclear, and subnuclear domains, with emphasis on the computational solution of problems suitable to the second-year level.

PHYS A230 Introduction to Electronics I 3 crs.

This course is a two-semester lecture laboratory course treating circuit theory and the properties of electronic tube and solid state devices. Two lectures and one lab are held per week.

Prerequisites: PHYS A110, A111, MATH A118 or A257.

PHYS A231 Introduction to Electronics II 3 crs.

Same description as PHYS A230.

Prerequisite: PHYS A230.

PHYS A295 Special Projects II arr.

PHYS A300 Classical Mechanics I 3 crs.

This course is a lecture course on classical mechanics, statics, and dynamics.

Prerequisites: PHYS A110, A111, MATH A259.

Co-registration: PHYS A335.

PHYS A301 Classical Mechanics II 3 crs.

This course is a continuation of A300, including special relativity and an introduction to general relativity.

Prerequisite: PHYS A300.

PHYS A335 Mathematical Physics II 3 crs.

This third-year course is designed to give the student a full mastery of the techniques of mathematical physics relating to linear and nonlinear differential equations and related areas with special emphasis on the equations of classical mechanics, the Schroedinger equation, and the Dirac equation. (With departmental approval, equivalent mathematical sciences courses may be substituted.)

Prerequisites: MATH A259, A310, PHYS A117.

PHYS A395 Special Projects III arr.

PHYS A400 Quantum Mechanics I 3 crs.

This course is an introductory course in quantum mechanics starting with definition of the wave function and basic properties of the Schroedinger equation and including an elementary presentation of underlying axiomatic structure.

Prerequisite: PHYS A300, A301.

PHYS A401 Quantum Mechanics II 3 crs.

This course is a continuation of A400.

Prerequisites: PHYS A300, A301, A400.

PHYS A410 Thermal Physics 3 crs.

This is an intermediate level single-semester course starting with discussion and applications of the first and second laws of thermodynamics. An introduction to statistical mechanics is presented with applications of Boltzman, Fermi-Dirac, and Bose-Einstein distributions.

Prerequisite: PHYS A228.

PHYS A425 Lasers and Modern Optics 3 crs.

Discussions will involve principles and practical aspects of laser operation and applications in modern optics; propagation of plane electromagnetic waves; diffraction and interference of light; gaussian beam propagation and optical resonators; theory of laser oscillation; gas, solid, semiconductor and dye lasers; detectors of optical radiation; nonlinear optics; applications in research and industry. Laboratory exercises include polarization, interference, Fourier optics, holography, gas, diode, and tunable lasers.

Prerequisites: PHYS A225, A228, A400.

PHYS A440 Advanced Physics Lab I 2 crs.

This is an advanced lab with minimum supervision with the objectives of training students to be self-reliant and resourceful in planning and performing experiments not ordinarily performed at the elementary level in mechanics, optics, thermodynamics, acoustics, atomic physics, solid state physics, spectroscopy, and electronics. Two labs are held per week.

Prerequisites: PHYS A231, A228.

**PHYS A441 Advanced
Physics Lab II 2 crs.**
Same description as PHYS A440.

PHYS A495 Special Projects IV arr.
Prerequisite: PHYS A395.

PHYS A496 Seminar/Workshop arr.
A seminar is a supervised group of students sharing the results of their research on a common topic. A workshop is a supervised group of students participating in a common effort.

**PHYS A497 Internship/
Practicum arr.**
An internship is supervised practical experience. A practicum is supervised practical application of previously studied theory.

PHYS A498 Research Project arr.
This project focuses on empirical or historical investigation, culminating in a written report.

PHYS A499 Independent Study arr.

PHYS H498 Honors Thesis 3 crs.

**PHYS T122 Introduction
to Physics 3 crs.**

Common Curriculum: Introductory
The purposes of the course are (1) to familiarize the student with the behavior of physical reality, (2) to consider the manner in which scientists across the ages have philosophized on physical reality, (3) to contrast classical physics with modern physics, and (4) to foster within the students a scientific literacy.

**PHYS T123 Introduction to
Physics Laboratory 1 cr.**
Common Curriculum: Introductory
For education students.

**PHYS Z130 Faith, Science,
and Religion 3 crs.**

*Common Curriculum: Natural Sciences
Modern*

This course will critically analyze various ways of knowing: faith, science, and theology (critical analysis of faith). The methods of the physical sciences and the life sciences will be discussed. Topics will include the epic of creation, evolution, and quantum theory.

PHYS Z134 Astronomy 3 crs.
*Common Curriculum: Natural Sciences
Modern*

The purpose of this course is to place the participant in one of the cultural mainstreams of mankind's past, present, and future by making available the rich mines of historical and practical astronomy, as well as modern space age discoveries and theories, in a comprehensive form.

POLITICAL SCIENCE

Arts and Sciences

**POLS A100 Introduction
to American
Government 3 crs.**

Structure, development, powers, and limits of the federal government are discussed.

**POLS A200 European and
Comparative
Government I 3 crs.**

This course discusses comparative political theory and exploration of cross national categories for political analysis. Discussions involve: Great Britain—origin of British constitution; the Crown, Parliament, etc., and France—heritage of the revolution and subsequent political structures; emphasis on politics of fifth republic. The British and French systems will be compared.

POLS A201 European and Comparative Government II 3 crs.

Topics covered concern Germany from 1871 to present; the background to the 1917 Communist Revolution in Russia; and Lenin, Stalin, and the Russian government today. An introduction to Chinese politics is included.

POLS A210 Introduction to Administrative Process 3 crs.

This course introduces the nature and role of public administration in contemporary America. Emphasis is on values and political influences which shape modern administration.

POLS A211 The American Presidency 3 crs.

This course is an examination of the American presidency in American government and politics. Emphasis is on interaction between the chief executive and other main national policy-makers, Congress, and the Supreme Court. The nature of presidential leadership, its development, and influence of personality on growth of the office receive special attention.

POLS A212 The Legislative Process 3 crs.

National, state, and local legislatures as lawmaking and political bodies are discussed with emphasis on the U.S. Congress. The course also concerns the legislative process including procedures, performance, and the role of the executive and parties and interest groups.

POLS A213 American Political Thought 3 crs.

This course is a roughly chronological survey of basic themes in American political thought, beginning with the 17th-century European origins of American political thought and extending to modern attempts to strike a balance between individual rights and social needs.

POLS A215 Introduction to State and Local Politics 3 crs.

This course examines the role of the states and localities in the American federal system. Emphasis is on political cultures and styles, policy-making institutions, and the changes reshaping their place in American government.

POLS A216 Politics of Race and Ethnicity 3 crs.

This course examines the significance of race and ethnicity in American politics, beginning with a historical look at early immigrant groups in the political system and then focusing on the experiences of particular groups today, including African-Americans, Latinos, and Asians. Finally, case studies from various U.S. cities are utilized to evaluate the gains that minority groups can achieve through electoral politics.

POLS A218 Courts/Judges/Politics 3 crs.

The course examines the role of the judiciary in the governmental policy-making process at both the federal and state levels. Emphasis is made on the role of political and social factors in the selection of judges and in judicial decision-making, as well as the interrelationship between law and politics in the American political and social systems.

POLS A220 The Urban Process 3 crs.

This course examines the nature of the modern city, with special attention to forces shaping the city, including the social, political, economic, ecological, and value systems which underlie the dynamics of urban life and culture. Attention is given to the various forms which cities have taken in the past and may take in the future.

POLS A221 Third World Politics 3 crs.

This course is an introduction to theories of development through an analysis of problems of development and the types of political structures most (and least) suitable for coping with modernization strains in specific countries in Latin America, Asia, and Africa.

POLS A230 History of Political Thought I 3 crs.

This course approaches the development of political thought from a traditional view, employing cultural and intellectual history and traditional philosophy to review the social, historical, and political contexts of thinkers such as Plato, Aristotle, Augustine, Aquinas, Machiavelli, and others.

POLS A231 History of Political Thought II 3 crs.

This course utilizes the same approach of POLS A230, but covers the period from 1500 to the present. It includes considerable discussion of Hobbes, Locke, Rousseau, Bentham, Mill, Hegel, and Marx.

POLS A300 Constitutional Law I 3 crs.

Discussions include the origins of constitutionalism and the framing of the U.S. Constitution; nature and scope of judicial review; sources and nature of legislative and executive power; the commerce power and state power to regulate; and introduction to 14th Amendment due process.

POLS A301 Constitutional Law II 3 crs.

This course discusses individual rights and liberties, with emphasis on post-1937 developments in areas of First Amendment and 14th Amendment equal protection.

POLS A305 Political Parties and Pressure Groups 3 crs.

This course involves party system, theory, and practice on national, state, and local levels; nominations, conventions, etc.; major pressure groups; methods used to mobilize public opinion; and the influence of pressure groups on government.

POLS A306 Political Leadership 3 crs.

This course examines the nature and role of leadership in modern politics as well as approaches to understanding leadership, with emphasis on leaders as agents of value change.

POLS A315 International Relations 3 crs.

This is a comprehensive, systematic study of fundamental principles that govern international politics.

POLS A320 U.S. Foreign Policy 3 crs.

This course examines post WWII U.S. behavior in international arena with emphasis divided between U.S. actions and reactions on a worldwide scale. Discussions of current events are held weekly.

POLS A325 Foreign Policy of Russia 3 crs.

Russian foreign policy since the revolution is presented and evaluated. Discussions of current events are held weekly.

POLS A340 Law Among Nations 3 crs.

The course utilizes legal and political approaches to understand the relationship between national sovereignty and the increasing need for communitarian action on issues of peace, war, human rights, and North-South relations. Treaty texts and cases of international and municipal courts are analyzed.

POLS A341 International Organizations 3 crs.

This course examines the historical origins and theories of international organizations and the patterns of communitarian behavior in the international system. Concentration will be on the United Nations, European Community, and N.A.T.O.

POLS A344 Scope and Methods in Political Science 3 crs.

An introduction to the methods of political analysis and criticism, the course analyzes political language, the media, the foundations of political argument, the science of politics, and the methodology of social science.

Prerequisites: POLS A100, A200 or A201 or A315 or permission of instructor.

POLS A346 Polling and Voting Behavior 3 crs.

This course is an examination of the psychological, cultural, and social bases of political behavior, including the study of attitude formation, group affiliation, collective behavior, and the role of values in political behavior.

POLS A347 Political Economy 3 crs.

This course is an introduction to the study of political economy and focuses on the development of the discipline from the 18th century to the present and engages the student in the debates surrounding some of the most important texts in political economy. The student will read Locke, Smith, Marx, and others who have influenced political-economic arguments in the modern west.

POLS A495 Special Project arr.

This project focuses on the creative or productive efforts of one or more students. A special project is distinguished from a research project in its lack of the historical or experimental method and perspective characteristics of research.

POLS A497 Internship/ Practicum arr.

An internship is supervised practical experience. A practicum is supervised practical application of previously studied theory.

POLS A499 Independent Study arr.

POLS W149 Ancient and Medieval Political Thought 3 crs.

Common Curriculum: Behavioral/Social Sciences Pre-modern

This course examines the development of political thought from the ancient Hebrews to the end of the Middle Ages, with special emphasis on Plato, Aristotle, St. Augustine, and St. Thomas Aquinas. Cultural and intellectual history as well as traditional philosophy are utilized to place these thinkers (and others) in their social, historical, and political contexts.

POLS X134 Politics and Corruption 3 crs.

Common Curriculum: Behavioral/Social Sciences Modern

This course covers issues of morality and corruption in American political life. Basic questions are: What moral standards guide—and should guide—the politician to make the system work better? How widespread is corruption in America and what forms does it take?

POLS X146 Politics and Society 3 crs.

Common Curriculum: Behavioral/Social Sciences Modern

The course is designed to introduce the student to the tools available for understanding and making decisions about both current and recurring political problems in modern society: Who should govern, who does govern, what is just government, are all citizens equal, must the individual or society prevail, what are rights, what is law?

POLS X152 The Bill of Rights 3 crs.

Common Curriculum: Behavioral/Social Sciences Modern

This course examines the nature and scope of civil liberties in America by focusing on the U.S. Constitution's chief source of fundamental liberties—the Bill of Rights. Major topics of discussion include origins and antecedents; the incorporation debate; and Supreme Court interpretations (and limitations) of fundamental freedoms.

POLS X154 American Political Ideas 3 crs.

Common Curriculum: Behavioral/Social Sciences Modern

This course discusses basic political concepts like freedom, equality, tradition, and success by introducing students to some of the most influential political and social thinkers writing about America. We will explore the history of some of these concepts and the debates surrounding them.

POLS X156 The Urban Form 3 crs.
Common Curriculum: Behavior/Social Sciences Modern

This course is an exploration of the cultural values expressed in the built form of 19th- and 20th-century cities in the U.S. and Europe. Through the works of historians, architects, planners, urban geographers, and other theorists—and through slides and films—students will examine modern and postmodern urban forms and critically assess their impact on society.

POLS X158 Global Political Issues 3 crs.

Common Curriculum: Behavioral/Social Sciences Modern

The global economy and wide accessibility of new technologies present serious political challenges. This course considers the dilemmas politicians face in addressing global problems ranging from nuclear politics to North-South issues. Other topics include global problem solving, related changes in national sovereignty, and detailed study of specific global issues.

POLS X159 Politics and the Media 3 crs.

Common Curriculum: Behavioral/Social Sciences Modern

This course examines how the media affect people's opinions and decision making. Significant events such as the Vietnam war will be analyzed to learn how communications affects decisions.

City College

POLS C100 Introduction to American Government 3 crs.

This course is a study of the structure, development, powers, and limits of the federal government.

POLS C110 Introduction to Political Analysis 3 crs.

This course studies the methods of evaluating political institutions and investigates the political socialization process. It prepares the student for further studies in political science.

POLS C215 Introduction to State and Local Politics 3 crs.

This course is a study of the role of the states and localities in the American federal system. Emphasis is placed on political cultures and styles, policy-making institutions, and the changes reshaping their place in American government.

POLS C289 Public Policy 3 crs.

This is a class in public policy. A simple definition of public policy is a course of action attempted by government to achieve a specific end. This course may be repeated for credit. Each time a course is given, a different policy area will be selected for study.

POLS C360 Politics and Community 3 crs.

This course investigates the political dimensions of American communities and considers how they should be organized, maintained, and changed. It asks how American communities can be both well-ordered and just.

POLS C365 Public Administration 3 crs.

The subject of this course is the size and cost of government. Few people like the idea of a large, expensive government. Yet, public bureaucracies grow more costly and more cumbersome each year. The purpose of this course is to study ways to make government run more efficiently and less expensively.

POLS C370 Government Economic Policy 3 crs.

This course reflects upon and discusses what government should and should not do to promote economic well-being in the U.S.

POLS C375 International Relations 3 crs.

This course looks at the causes of competition between nation-states and focuses on economic competition and war.

**POLS C376 Comparative
Politics 3 crs.**

This course explores why comparative methods are a valuable aid to understanding world politics. A close look is taken at various kinds of political systems that operate around the world. Special attention is paid to the problem of economic development, but related cultural and political factors within each region are also studied.

**POLS C377 Politics of
International
Trade 3 crs.**

This course studies the interplay of economics and politics in the world arena. Students will study those systems which produce, distribute, and use wealth and the set of rules and institutions by which that system is governed.

POLS C380 Politics of Poverty 3 crs.

This course looks at the causes of poverty and arguments for and against federal assistance programs. It focuses on conditions in the inner city and asks why poverty is difficult to alleviate.

**POLS C385 Politics and
Technology 3 crs.**

This course explores the meaning and future of modern technology by tracing its historical movement and by investigating how technology is influencing political conflict.

POLS C460 Political Theory 3 crs.

The purpose of this course is to introduce undergraduate students to the history of Western political thought and the enterprise of political theory. The course will provide extensive excerpts from classic texts plus commentaries that present a variety of viewpoints.

**POLS C489 Politics and
Culture in Film 3 crs.**

This course studies the connections between politics and culture. It focuses on film as a medium of political and cultural socialization. Content varies. May be repeated once for credit.

PSYCHOLOGY

Arts and Sciences

**PSYC A100 Introduction
to Psychology 3 crs.**

This course is a survey of the major fields of psychology. It is a prerequisite for all other psychology courses.

**PSYC A230 Developmental
Psychology 3 crs.**

This course covers the development of behavior and psychological activity through the prenatal period, infancy, childhood, adolescence, maturity, and old age with emphasis on the normal person.

Prerequisite: PSYC A100.

**PSYC A235 Abnormal
Psychology 3 crs.**

This course is a survey of psychological disorders with emphasis on clinical "picture," explanatory theories, and etiological research. Therapy procedures are briefly addressed.

Prerequisite: PSYC A100.

PSYC A240 Social Psychology 3 crs.

Social determinants of individual behavior and of group interaction are examined with emphasis on current research literature.

Prerequisite: PSYC A100.

**PSYC A241 Psychology
of Personal
Adjustment 3 crs.**

Good personal adjustment is defined as the effective solution of individual problems and the creation of a viable system of personal values. The constraints and conditions affecting these behaviors are examined.

Prerequisite: PSYC A100.

**PSYC A245 Psychology of Sport
and Exercise 3 crs.**

This course is an introduction to theory, research, and application in the field of sport and exercise psychology. The focus is on psychological factors that affect participation, involvement, and performance in sport and exercise.

Prerequisite: PSYC A100.