

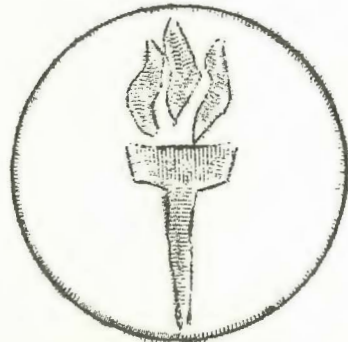
Washington



COURSE

DESCRIPTIONS

1973 - 1974



ANTHROPOLOGY 156

100. General Anthropology. (3) A course planned to give the student a general understanding of man in relation to the cultures he has built. Deals with man's evolutionary development, his capacity for society, and the development of the world's major cultures. Open to freshmen. May not be taken by those who have taken ILS 121.
200. Cultural Anthropology. (3) Variations of human cultures throughout the world and the comparative study of human institutions. Prerequisite: sophomore standing or Anthropology 100.

ART 168

100. Design and Drawing. (2) A broad course in the elementary principles of design in the space arts. Applications are made in the basic craft materials, drawing and printing media. It is a laboratory-lecture course that meets four hours per week. It will not apply for a major or minor in art and art education; majors and minors in that field should take the 101-102 and 131-132 sequence.
101. Basic Drawing 2. (3) This course embraces basic linear perspective with an introduction to aerial perspective (light and shade). Emphasis is on the qualities of line, texture, and volume for its expressive qualities. Work is done from the actual object and the human figure. The course meets for six hours per week as a workshop. Open to freshmen.

102. Basic Drawing 2. (3) This course continues the study of aerial perspective as applied to more complex objects and pictorial situations. There is a thorough exploration of many drawing media. The course meets six hours a week in a workshop. Prerequisite: Art 101. Open to freshmen.
123. Man and the Visual Arts. (3) Survey of the cultural history of Western art with an emphasis on contemporary trends and on the development of both critical means and articulate vocabulary for understanding currents in new art. Field trip required.
126. Contemporary Expressive Arts. (3) Painting, sculpture, the graphic arts, photography and films are the topics covered in a discussion of their antecedents. Field trip required.
127. Contemporary Applied Arts. (3) A study of the development of contemporary architecture, furniture design, and general design as it reflects life in the twentieth century. Field trip required.
131. Creative Design 1. (3) A lecture-laboratory course that meets six hours per week. It deals with the basic elements of design in materials. Open to freshmen.
132. Creative Design 2. (3) A lecture-laboratory course that meets six hours per week. It gives the student the basic elements of design as applied to three-dimensional materials. Open to freshmen.

221. Sculpture 1. (3) A laboratory course that meets six hours per week. Prerequisite: Art 132.
222. Sculpture 2. (3) A laboratory course that meets six hours per week. Prerequisite: Art 221.
261. Ceramics 1. (3) The introduction to the methods of pot production stressing slab, coil and simple wheel construction. A laboratory course meeting six hours per week. Prerequisites: Art 131 and 132.
262. Ceramics 2. (3) Continuation of Ceramics 1. Prerequisite: Art 261.

#### BACTERIOLOGY 192

101. General Survey of Bacteriology. (4)

Fundamentals: What microorganisms are, their structure and classification; how they obtain and utilize foods, and chemical changes they cause; genetics and multiplication of microorganisms; killing and inhibiting them by use of physical and chemical agencies.

Applied Microbiology: Industrial uses of microorganisms, microbiology of sewage treatment and disposal, of water for use by human beings, including public health aspects of the subject; microbiology of the production, preservation, and spoilage of foods and feeds; food-borne pathogens and toxins; microbiology of air; infectious diseases of man and animals; brief consideration of microbiology of diseases of plants. Prerequisite: an introductory chemistry course; Chemistry 102 or 108.

BOTANY 208

100. Survey of Botany. (3) A general survey of botany including structure, functions, and life histories (cycle) of representative plants throughout the plant kingdom. The course attempts to provide information of general educational value to students who do not plan to major in botany or take additional courses in botany.
130. General Botany. (5) An introduction to plant sciences including the structure, functions, development and physiology of plants. Life histories of representative divisions throughout the plant kingdom. Introduction to tree identification. Recent advances in botany. The laboratory provides opportunities to study the chemistry and physiology of the flowering plant and preserved plant specimens.
290. Selected Topics in Botany. (1) The course offers independent study in which students review the literature on a certain topic and carry on experiments on their own. A report is required at the end of the semester. Prerequisite: Consent of instructor and approval of the department chairman.

BUSINESS ADMINISTRATION 216.

200. Introductory Accounting. (3) Mechanics of the accounting cycle: journalizing, posting, adjusting and closing entries, preparation of financial statements for sole proprietorship, partnership and corporations. Generally accepted accounting principles as they relate to recording and presenting basic

basic balance sheet accounts. Special accounting problems unique to partnerships and corporations. Open to second semester freshmen; sophomore standing recommended. (May not be included in credits for graduation in the College of Letters and Science, Madison.)

201. Intermediate Accounting. (3) Accounting theory, principles, concepts and procedures as they apply to balance sheet and income statement accounts; presentation and interpretation of financial reports, including the problems of terminology, manufacturing valuation and analysis. Prerequisite: Business Administration 200.
202. Managerial Accounting. (3) Interpretation and use of accounting reports by management in planning, coordinating and controlling business activities, presentation, analysis and interpretation of financial data, internal control and reports to management, cost-volume-profit relationships, budgets, costs and managerial decisions. Prerequisite: Business Administration 200.

CHEMISTRY 224

102. General Chemistry. (5) Three hours of lecture, one hour of recitation, open laboratory requiring approximately three hours. A course in general inorganic chemistry, beginning with the study of non-metals and of the fundamental principles of chemistry.
104. General Chemistry and Qualitative Analysis. (5) Three hours of lecture, one hour of recitation, open laboratory requiring approximately three hours. Continuation of Chemistry 102 or 103. Prerequisite: Chemistry 102 or 103.

- 107. Numerical Problems in General Chemistry. (1)  
A one-semester course dealing with important mathematical relationships in chemistry. A minimum amount of calculus is employed. Independent solving of problems is emphasized. Meets two hours per week. Required of chemistry course and chemical engineering majors. Prerequisite: Chemistry 104 or concurrent registration.
  
- 108. General Chemistry. (5) For the student who will take only one semester of chemistry. Three hours of lecture, one hour of recitation, one three-hour laboratory. A one-semester course with extra emphasis on organic chemistry. Does not serve as a prerequisite for second semester general chemistry.
  
- 201. Survey of Biochemistry. (3-4) Lectures and demonstrations on the chemical makeup and metabolism of living organisms presented at an elementary level for non-science majors. Main emphasis on proteins, enzymes, nature of enzyme action, carbohydrates and fats as energy sources, metabolic processes involved in energy production, nucleic acids, biochemistry of genetic information transfer and protein biosynthesis. Not accepted toward requirements for undergraduate or graduate degrees in biochemistry. May be taken for four credits when laboratory work is offered. Prerequisite: Chemistry 108 or equivalent.
  
- 223. Elementary Quantitative Analysis. (4) Two hours of lecture, two four-hour laboratories. A course in the essentials of quantitative analysis. Analysis of naturally occurring

ores and commercial materials. For chemistry majors and chemical engineering students.

(Satisfies requirements for Chemistry 221.)

Prerequisite: General Chemistry, including qualitative analysis.

343. Introductory Organic Chemistry (3) An intensive study of the chemistry of carbon and its compounds. Material is presented in the traditional (homologous series) fashion with special emphasis on reaction mechanisms, synthetic routes, and spectra (I.R. and N.M.R.) Taught basically by lecture. Required of majors in chemistry, chemical engineering, pre-med, pharmacy, dentistry and other paramedical programs. Prerequisite: Chemistry 104 or its equivalent.
344. Introductory Organic Chemistry Lab. (2) Eight hours of laboratory. Includes qualitative tests for elements found in organic compounds, preparation, purification and identification of representative organic compounds, and study of reaction kinetics. A multistep synthesis concludes the semester. Technique is emphasized. Modern instrumentation is available for student use. Independent work by qualified students is encouraged. The careful recording of data and its interpretation is stressed. Basically a laboratory course required of majors in chemistry, chemical engineering, pre-med and pharmacy. It partially satisfies the natural science requirement at most colleges and universities and is fully transferable. Prerequisite: Chemistry 343 or concurrent enrollment.
345. Intermediate Organic Chemistry (3) A continuation of Chemistry 343, using the same book and same techniques. Special attention is paid to the use of spectra (I.R. and N.M.R.) in structure determination. Required of majors in chemistry, chemical engineering, pre-med, pharmacy, dentistry



and other paramedical programs. Prerequisite: Chemistry 343.

#### COMPUTER SCIENCES 246

132. Introduction to Computing Machines. (3) How computers work, communicating with computers, areas of application and significance, simple algebraic language programming, elementary data processing and problem solving. An intensive and demanding survey course. The class meets four hours each week to allow the instructor to supervise student programming efforts. Prerequisite: intermediate level high school mathematics or a course in college mathematics.

#### EDUCATION

200. Field Experience. (2) A field practicum for pre-education majors. Requires 70 hours of work in a school or other educational program. Required for admission into some schools of education.

#### ECONOMICS 296

101. General Economics. (3) A study of the economic system, with emphasis on problems and policies, for students not planning to major in economics or business. Among subjects included are markets and prices, income distribution, business fluctuations, economic growth and comparative economic systems. Students planning to major in economics or business administration should take Economics 103 or 104. Students who take Economics 101 and then decide to major in economics or

business may take Economics 103 and 104 but will probably receive a total of only six credits for all three courses. May not be taken for credit by students who have had or are currently enrolled in Economics 103 or 104.

103. Principles of Economics. (3) Designed for students who plan to major in economics or business or for students who desire a basic one-year course (with Economics 104) in economics. This course, macroeconomics, covers national income, business fluctuations, monetary and fiscal policies and economic growth.
104. Principles of Economics. (3) Covers the microeconomic approach, household, firm and market structures, and focuses on price determination and distribution of income. Foreign trade and international financial institutions are included. A student may elect Economics 104 prior to Economics 103, but the second course in his economics sequence must then be Economics 103.

#### ENGINEERING GRAPHICS 343

102. Elements of Descriptive Geometry. (3) Provides skill in principles of good graphic design analysis. Methods and techniques are explored to furnish answers in spatial relationships, and drawing practice to solve geometric problems. The course lays foundation for design work in engineering course 113. Course introduces a new concept for an industrial tractor for a problem and study.
113. General Engineering Graphics. (3) Provides skill in the principles of good graphic design development. Methods and techniques are explored to furnish not only a good product but justification in producing, selling and servicing the

commodity. Sketching, brainstorming, cost reduction, report making, patent consideration as well as decision making in selecting, improving, documenting and finalizing the original idea. Course develops new concept of articulated vehicle from course 102.

### ENGINEERING MECHANICS 346

101. Statics. (3) Principles of mechanics, force systems, equilibrium, structures, distributed forces, moments of inertia of areas, and friction. This course will serve the requirements of the several engineering curricula. Prerequisite: Mathematics 221.
102. Dynamics. (3) Kinematics, force-mass-acceleration relations, work and energy, impulse and momentum, moments of inertia of mass. This course will serve the requirements of the several engineering curricula. Prerequisites: Engineering Mechanics 101 and Mathematics 222.

### ENGLISH 350

101. Fundamentals of Writing. (3) The course concentrates on developing the students' proficiency in standard English diction, sentence structure, paragraph structure, and the structure of the whole composition. Exemption from English 101 will be granted on the basis of a student's performance on the placement examination taken as part of the registration procedures. Not open for credit to students who have previously received credit for English 102 with a C or better grade, except with instructor's permission.

102. Introductory Writing. (3) A basic course intended to develop ability to write clearly and effectively. Prerequisite: English 101 or exemption.
200. Introduction to Literature. (3) Intensive analysis of poetry, drama and fiction, using representative types from several periods of English and American literature. Prerequisite: English 101 or exemption.
201. Expository Writing. (3) The theory and practice of informative and persuasive writing. Prerequisite: English 102 or its equivalent, or departmental waiver of this prerequisite based on placement test scores.
203. Introduction to Creative Writing. (3) Chiefly devoted to writing and studying the short story. Prerequisite: English 102 or its equivalent or consent of the campus department.
205. English Literature. (3) A study of representative work by the most outstanding English writers. Prerequisite: English 200 or one semester of sophomore literature other than English literature.
209. Twentieth Century Literature. (3) An approach to literature through significant and representative modern prose and poetry. Prerequisite: English 200 or one semester of sophomore literature other than twentieth century literature.
211. American Literature. (3) A study of representative work by the most outstanding American writers. Prerequisite: English 200 or one semester of sophomore literature other than American literature.

227. Introduction to Shakespeare. (3) Ten to twelve representative plays and the sonnets are read. Prerequisite: six credits of literature or three credits of literature and the consent of the campus department.
251. Studies in Dramatic Literature. (3) An exploration of some aspect of drama or the theory of drama, the internal history of the genre or the distinctive character of the mode, and its application in practical criticism to an appropriate body of English and American literature. Prerequisite: six credits of literature or three credits of literature and the consent of the campus department.
299. Independent Reading. (1-3) Prerequisite: six credits of English and consent of instructor.

#### GEOGRAPHY 416

101. Introduction to Cultural Geography. (3) Spatial analysis of cultural and societal behavior and forms. Stresses the application of the scientific method and analytical tools to social patterns and problems. Open to freshmen.
110. The World: Peoples and Regions. (3) Introduction to cultural geography through the study of representative and significant regions and nations. Open to freshmen.
115. Economic Geography. (3) Analysis of world systems of economic behavior (agricultural, urban, etc.) approached in terms of model building and decision-making theory. Students

are also involved in field work, data gathering and analysis of local economic phenomena. Open to freshmen.

120. Survey of Physical Geography. (3) Characteristics and world distribution of physical factors which in combination form the natural environment. Topics include landforms (glaciers, volcanoes, etc.) and landform processes; earth materials (soils, rocks, minerals); elements of weather and climate (temperature, pressure, precipitation); primary and secondary circulation of the atmosphere including storms; climatic types; and some additional topics if time permits. Field trip required. Open to freshmen or sophomores.
123. Physical Geography. (5) Earth-sun relationships; elements and controls of weather and climate (temperature, pressure, precipitation, storms, etc.); primary and secondary circulation of the atmosphere; characteristics, distribution and significance of climatic types; climatic change and weather modification; climate of cities; micro- and crypto-climate; soils and vegetation. Laboratory work required. Open to freshmen or sophomores.
124. Physical Geography. Landforms (Glaciers, Landforms, etc.) (5) Introduction to maps; characteristics, distribution and significance of landform types; the continental margins and the sea floors, water resources of the land; mineral resources. Laboratory and field trips. Open to freshmen.
125. Survey of Physical Geography. (3) Content similar to that of Geography 120 except that 125 has no laboratory work. Field trip required. Open to freshmen or sophomores. This is a one-semester survey course which deals with certain topics covered in Geography 123 and 124.

521. Middle America. (3) Description and analysis of the physical and cultural landscape of Mexico, Central America and the West Indies. Sophomore standing.

GERMAN 424

103. First Semester German (4) For students with no previous knowledge of the language. The audio-lingual approach places primary emphasis on speaking and understanding spoken German; secondary emphasis is on grammar, reading and culture.
104. Second Semester German. (4) Continuation of German 103. Prerequisite: German 103 or equivalent.

HISTORY 448

101. American History 1607-1865--The Origin and Growth of the United States. (3) Survey of American political, economic and social development from the founding of the colonies to the Civil War.
102. American History, 1865 to the Present. (3) Survey of American political, economic, social, cultural and intellectual development from the Civil War to the present.
115. Medieval Europe, 410-1500. (3) General introduction to the history of Europe from the later Roman Empire to the end of the Middle Ages.
119. The Making of Modern Europe, 1500-1815. (3) An introduction to the principal developments in the history of Europe from the Renaissance to the fall of Napoleon.

120. Europe and the Modern World, 1815 to the Present.  
(3) A general survey of the political, economic, social and cultural history of modern Western civilization from Napoleon to the present.

JOURNALISM 512

100. Journalism Laboratory. (0-1) Practical application of the principles of observing, reporting, writing, and editing, photography and management for journalistic publications or newscasts. Students work for a campus publication and submit copies and reports of their work to the instructor for evaluation and critique. Specific requirements are made by the instructor. Open to all students every semester by consent of instructor.
201. Mass Communications: Role and Effects of Press, Radio, Television and Film in Modern Society (Same as Speech 250). (3) A survey and analysis of newspapers, magazines, radio, television and film; their organization and function in modern society. Includes an introduction to the history, regulations, social and ethical implications, technological, economic and political foundations and problems of the mass media. Required for journalism majors on the Madison campus.

MATHEMATICS 600

101. Introductory College Algebra. (3) Basic properties of the rational and the real number systems; the fundamental operations of algebra; linear and quadratic equations and inequalities; graphing linear functions, direct and inverse variation. Prerequisite: two years of high school mathematics including elementary algebra and geometry.



106. Pre-Calculus Mathematics. (4) A combination of Algebra 112 and Trigonometry 113. Theory of equations; systems of linear equations and inequalities; conic sections and systems of quadratic equations and inequalities; complex numbers; inverse functions; logarithms and exponential functions; trigonometry; sequences and the binomial theorem. Prerequisites: Mathematics 101 or two years of high school algebra, one year of geometry and a satisfactory score on the placement exam.
112. College Algebra. (3) Non-linear functions and graphs, including logarithmic and exponential functions; systems of linear equations; theory of polynomial equations; complex numbers; mathematical induction and the binomial theorem; arithmetic and geometric progressions. Prerequisites: same as for Mathematics 106.
113. Plane Trigonometry. (2) Trigonometric functions, their basic properties and graphs; trigonometric identities and equations; geometric applications of trigonometric functions; trigonometric form of complex numbers and DeMoivre's Theorem. Prerequisites: Mathematics 112 or concurrent registration, or four years of high school math and satisfactory score on placement exam.
115. Mathematics for Elementary Teachers. (4) Basic concepts of set theory and logic; structure of mathematical systems, development of number systems; systems of numeration; development of the basic algorithms of arithmetic. Prerequisites: one unit each of high school algebra and geometry; sophomore standing and registration in the Program for Preparation of Elementary School Teachers.

117. Elements of Statistics. (3) The primary aim of the course is a basic understanding and use of statistical concepts and methods to facilitate study and research in other disciplines. Topics include organization and presentation of data, descriptive statistics, special frequency distributions, sampling, estimation, confidence intervals, time series analysis, regression and correlation. Prerequisite: Mathematics 101 or equivalent.
118. Introductory Mathematics of Finance. (2) Mathematical characteristics of currently used financial growth laws; annuities; amortization; sinking funds and bonds. Prerequisites: Mathematics 106 or 112 or four years of high school math and a satisfactory score on the placement examination.
119. Introductory Finite Probability. (2) The algebra of sets; elementary logic and probability; Bayes theorem; independent events. Prerequisites: same as for Mathematics 118.
211. A Survey of Calculus (4) Primarily for students going into business, economics or any other social science that requires some calculus. Topics include the essential concepts of differential and integral calculus and their applications. Students who are preparing for further study in mathematics, engineering or physical sciences should take the sequence Mathematics 221, 222, 223. Prerequisites: Mathematics 106 or 112 or four units of high school math and a satisfactory score on the placement examination.
221. Calculus and Analytic Geometry. (5) An introduction to differential and integral calculus and plane analytic geometry, with applications. Prerequisites: Mathematics 106, or 112 and 113, or four units of high school math and a satisfactory score on the placement examination.

222. Calculus and Analytic Geometry. (5) Continuation of Mathematics 221. Further topics in analytic geometry and calculus; transcendental functions and vectors; techniques and application of integration; improper integrals. For both engineering and non-engineering students. Prerequisite: Mathematics 221.
223. Calculus and Analytic Geometry. (4) Continuation of Mathematics 222. Functions of more than one variable, with emphasis on partial derivatives and multiple integrals, introduction to differential equations. For both engineering and non-engineering students. Prerequisite: Mathematics 222.
320. Linear Mathematics. (4) Introduction to linear algebra, vector spaces, matrices, linear transformations, and eigenvalues. Ordinary differential equations and linear systems of differential equations. Prerequisite: Mathematics 223.

MUSIC 660

040. Band. (0-1) Open to all students. Band training, study and performance of standard band literature.
- 055 Chorus. (0-1) Open to all students. Choral vocal training, study and performance of concert literature.
062. Orchestra. (0-1) Open to all students by tryout. Playing of music from symphonic repertoire.

101. Fundamentals of Music. (3) Experiences in actually making music through singing and playing. Activities are coordinated with a thorough explanation of the written language of music; note reading for voice and instrument. Some emphasis on the basic acoustical phenomena of music is included. Not accepted as part of a music major or minor or towards a degree in Letters and Science at Madison or Milwaukee. Class meets for three hours.
121. First Year Theory (4) Studies of the basic skill involved in writing, analyzing and hearing music. On an elementary basis, a student should be able to write what he hears, hear what he writes and analyze both, after taking Music 121 and 122. Presented by lecture, ear training lab, discussion, films and strips and recordings. Open only to music majors and minors. It is recommended that students have a background in piano before taking this course. Class meets for five hours.
122. First Year Theory. (4) A continuation of Music 121. Prerequisite: Music 121.
201. Introduction to Music Literature. (2-3) An introduction to music listening and a coverage of music literature by historical periods to enable the student to develop the skills in listening which can lead to an appreciation of music. Not accepted as part of a music major or minor. Class meets for three hours.
211. History of Western Music. (3) A survey of the historical development of musical style and theoretical concepts from ancient Greece to the present. Also includes a discussion of contemporary popular and commercial music and its cultural implications. Consent of instructor.

212. History of Western Music. (3) A continuation of Music 211.
221. Second Year Theory (4) Aural and written harmony; keyboard harmony and figured bass; harmonic counterpoint; sight singing and sight playing; ear training analysis; analysis of contemporary music and a limited amount of original composition depending on the ability of individual students. Class meets for five hours. Prerequisite: consent of instructor
222. Second Year Theory. (4) A continuation of Music 221.
241. Vocal Technics. (2) Theory and practice in fundamentals of singing. Class meets for three hours. Prerequisite: Music 122 or consent of instructor.
263. Vocal Ensemble. (1) Prerequisite: Consent of instructor.
265. Woodwind Ensemble. (1-2) Prerequisite: Consent of instructor.
267. Brass Ensemble. (1-2) Prerequisite: Consent of instructor.
269. String Ensemble. (1) Prerequisite: Consent of instructor.
271. Jazz Stage Band Ensemble. (1) Prerequisite: Consent of instructor.

MUSIC APPLIED 664

Piano, Voice, Instrumental. (1-2) For full-time students who are music majors. Prerequisite: Consent of instructor.

PHILOSOPHY 736

101. Introduction to Philosophy. (3) Introduces the student to traditional philosophical problems such as freedom, knowledge, what is real and what ought to be valued. Open to freshmen and sophomores who have had no previous philosophy courses other than Philosophy 211.
102. Introduction to Social and Political Philosophy. (3) Introduction to philosophical conceptions of man and his social and political life. This is accomplished by presenting and evaluating opposing views on the nature of political and social organization and what role the individual plays in such organization. Possible topics for investigation and discussion include: war, justice, repression and alienation, civil disobedience and the law, and the social sciences. Prerequisite: Philosophy 101 or sophomore standing.
211. Elementary Logic. (3) Principles, standards and methods of distinguishing good reasoning from bad, as applied to deductive and inductive inferences. Nature and detection of fallacies, and linguistic pitfalls affecting reasoning. Open to freshmen and sophomores.

PHYSICAL EDUCATION-GENERAL 740 (1 credit each)

032. Beginning Tennis. Includes the history and nature of the game, equipment needed, basic skills, rules of scoring and game strategy.
048. Beginning Horsemanship (English Pleasure Riding)  
The student learns the parts of the horse, the saddle and bridle, how to groom, care for, saddle, and ride his mount comfortably and safely, using the balanced seat. All equipment furnished.

049. Intermediate Horsemanship (English Pleasure Riding). Student moves from the primary gaits to cantering and low hurdling. Classes include room instruction, work detail, primary riding instruction leading to formation riding, exercises, relays, games and cross country riding. Prerequisite: Beginning Horsemanship or consent of instructor.
070. Beginning Modern Dance. Deals with the analysis of dance movement, including tensions, rhythms, jumps, runs, lunges, leaps and turns, with improvisations included.
072. Intermediate Modern Dance. Continues with the basic steps but goes more intensively into the movements including introduction to choreographic works. Prerequisite: Beginning dance or consent of instructor.
078. Beginning Snow Skiing. Includes the history, type of equipment, techniques of participation, carrying the skis, holding the poles, walking on level terrain, walking uphill, falling, kick turn, straight running, straight snowplow snowplow turn and the traverse. Student provides own equipment.
079. Intermediate Snow Skiing. Deals with the stem turn, sideslipping, uphill christie, stem christie and the parallel christie. Prerequisite: Beginning Skiing or consent of instructor. Student provides own equipment.
090. Intermediate Swimming. Includes skill development in the front crawl, elementary backstroke, breaststroke, and sidestroke; also, the survival float, underwater swim and rescue skills. Prerequisite: Beginning swimming or consent of instructor.

092. Senior Life Saving. The student will become certified as an American Red Cross Senior Life Saver. Prerequisite: consent of instructor.
094. Water Safety Instructor (WSI). Student must have a current senior life saving rating. This course will qualify you to teach the novice, beginner, advanced beginner, intermediate swimmers and the senior life saving courses.
099. Beginning Swimming. Course concentrates on adjustment to the water, floating, turning from back to front, the front crawl and leveling off in deep water. It progresses into the elementary backstroke and survival floating.

PHYSICAL EDUCATION - PROFESSIONAL 742

116. First Aid (1-2). The one-credit course informs the student how to handle common emergencies and injuries; the two-credit course prepares students to become instructors in first aid upon completion of course with a grade of B or better.
117. Introduction of Play and Recreation (2). Course is designed to acquaint you with the spectrum of play theories, history of play including its origins and evolution in various cultures and time period. To become aware of the problems involved in the organization, operation, and administration of playgrounds. It is hoped that on completion of the course, you will have sufficient knowledge and information to step into a community and organize a summer playground program or assist in a large system.
119. Soccer Fundamentals (1). To develop proficiency in performing the basic skills required to successfully program, teach and coach soccer. Includes



techniques and skill, team tactics and systems of play. Course geared to learning techniques of playing as well as coaching.

PHYSICS 754

105. General Physics. (4) Studies in mechanics, heat, wave, motion and sound. Recommended for students majoring in business, elementary education, medical technology, pharmacy, physical education, pre-dentistry and pre-medical studies. Prerequisites: one unit high school algebra and one unit high school plane geometry.
106. General Physics. (4) Continuation of Physics 105. Electricity and magnetism, light, and modern physics. Prerequisite: Physics 105.
107. Ideas of Modern Physics for Non-Science Majors. (3) Introductory course for non-science majors; a small range of topics covered in depth, with particular emphasis on the development of modern theoretical concepts such as: classical mechanics and electro-magnetism; quantum theory; relativity theory. Not open to those who have had one or more courses in college physics; does not apply toward engineering or physics majors or toward physics requirements for pre-professional courses (medicine, pharmacy, medical technology, etc.) Prerequisite: minimum math preparation.
201. General Physics for Engineers. (5) Studies in mechanics, wave motion, sound and heat. Recommended for engineering students and science majors. Prerequisite: Mathematics 222 or concurrent registration.
202. General Physics for Engineers. (5) Continuation of Physics 201. Covers magnetism, electricity and light. Prerequisite: Physics 201.

PHYSIOLOGY 762

104. Anatomy and Physiology. (4) Lectures and laboratory dealing with the structure of the human body and the physiology of the organ systems. Prerequisites: general chemistry or concurrent registration in general chemistry with consent of instructor, and a college course in biology or zoology.

POLITICAL SCIENCE 778

101. Introduction to Politics. (3) A general introduction to political science, including basic concepts such as power, authority, legitimacy; types of political systems, and approaches to the study of politics; problems common to all political systems. Open to freshmen and sophomores.
106. Comparative Politics of Major Nations. (3) Analysis of the political systems of select major nations of the world, stressing comparison of cultures, institutions, processes and methods of comparative analysis. Open to freshmen and sophomores.
125. State and Local Government. (3) Organization, structure and function of state and local governments, with emphasis on Wisconsin. Open to freshmen and sophomores.
213. Urban Politics. (3) Organization and structure of city phenomena, including government, politics, development, policy problems and futures. Open to freshmen and sophomores.

PSYCHOLOGY 820

201. Introduction to Psychology. (4) This course is designed to provide the student with an overview of the major areas of psychology and covers the major theories, methods, and research findings in each area. The student is encouraged to find at least one area of special interest in which she/he will be willing to do outside reading and/or some kind of project. An attempt is made to provide the student with the tools to understand and evaluate the kinds of things being done in contemporary psychology. Prerequisite: advanced freshman standing.
202. Introduction to Psychology. (3) (See course description for Psychology 201).
204. Experiential Introduction of Concepts of Human Behavior. (3) Lecture/discussion presentation of concepts of human behavior related to concurrent experiences in community agencies, e.g., county home, public schools, facilities for physically handicapped, programs for children and adults with behavior problems. Agency placements require a minimum commitment of five hours per week and will provide direct contact between students and agency clients. Class meets once weekly for two hours of lecture/discussion. Prerequisite: consent of instructor.
205. Psychology of Human Adjustment. (3) Theories of human behavior and methods of behavior change; issues in the analysis and treatment of behavior problems, e.g., "mental illness" vs. problems in living, commitment, drugs; what constitutes an adequate approach to the

problem of "adjustment"; a review of research findings relevant to these issues. Prerequisite: Psychology 201 or 202. Does not count toward the major in psychology.

530. Introductory Social Psychology. (3) Social influences on beliefs and behaviors; conformity, persuasion, aggression, behavior in groups, interpersonal attraction and communication. Topics are discussed in the context of current experimental evidence. Prerequisites: Psychology 201 or 202, Sociology 101 or Anthropology 100; also sophomore standing or consent of instructor.
560. Child Psychology. (3) There is a general emphasis on experimental results and the systematic investigation of how an infant grows into an adult. It is hoped that the student will come to understand the major theories of development as well as the relationship between these theories and the experimental results prominent in the field of child psychology. Prerequisite: Psychology 201 or 202.

#### SOCIOLOGY 900

101. Man in Society: An Introduction to Sociology. (3) A course in interrelationships of personality, society and culture; social processes, structures, institutions and functions as they affect the building up and tearing down of society. Open to freshmen.
120. Marriage and the Family. (3) Nature of the family. Processes of courtship and marriage interaction. Correlations of physiological, psychological, economic and sociological contributions to marriage and family life. Open to freshmen.

125. Contemporary American Society. (3) Patterns of contemporary social life in the United States and Canada; cultural orientation, social structures and dynamics of social change. Open to freshmen.
130. Social Disorganization. (3) Conditions and processes in personal and social maladjustment; nature of social problems, their relations to social change and basic ideological, technological and institutional structures and processes. Open to freshmen.
134. Problems of American Minority Groups. (3) The nature, problems and adjustments of American racial, religious, ethnic and nationality groups; proposals for reduction of intergroup tension. Open to freshmen.
530. Introductory Social Psychology. (3) Social influences on beliefs and behaviors; conformity, persuasion, aggression, behavior in groups, interpersonal attraction and communication. Topics are discussed in the context of current experimental evidence. Prerequisites: Psychology 201 or 202, Sociology 101 or Anthropology 100; also sophomore standing or consent of instructor. (Same as Psychology 530.)

SPANISH 912

103. First Semester Spanish. (4) Spanish grammar, elementary reading, oral practice and cultural background. For students who have had no Spanish.
104. Second Semester Spanish. (4) A continuation of Spanish 103. Prerequisite: Spanish 103 or one year of high school Spanish.

203. Third Semester Spanish. (4) Grammar review; intensive class reading; study of vocabulary, idioms and syntax; oral and composition practice. Prerequisite: Spanish 104 or two years of high school Spanish (or equivalent).
204. Fourth Semester Spanish. (4) A continuation of Spanish 203. Prerequisite: Spanish 203 or three years of high school Spanish. With department consent, exceptional students may be permitted to take Spanish 204 and Spanish 225 concurrently.
225. Third-Year Conversation and Composition. (3) Emphasis on oral and composition practice. Prerequisite: Spanish 204 or equivalent.
226. Third-Year Conversation and Composition. (3) A continuation of Spanish 225. Prerequisite: Spanish 225 or equivalent.
236. Latin American Culture and Civilization. (3) The course is designed to excite any student whose interests lie in anthropology, archeology, history, the arts, etc., dealing with western man in our Western Hemisphere.
266. Latin-American Literature in Translation. (3) This is a humanities course designed to acquaint the American student with what is now considered to be some of the richest and most interesting literature being written in the world. No prerequisite. Open to students who have completed Spanish 204 only with consent of instructor. No language credit.
275. Masterpieces of Spanish Literature in Translation. (3) Presentation of the culture of the Spanish people and its relation to that of Western Europe and America, through study of Spanish literary masterpieces. No prerequi-

site. Open to students who have completed Spanish 204 only with consent of instructor. No language credit.

PEECH 920

101. Introduction to Public Speaking. (3) Study of the principles and techniques of effective speech and an application of these fundamentals in a variety of selected communication experiences. Open to freshmen.
102. Forensics Laboratory (3) Active participation in intercollegiate forensics activities, including but not limited to oral interpretations, oratory, extempore speaking, after-dinner speaking, impromptu speaking, discussion, improvisation, play reading. Preparation of special programs. Open to all students with consent of instructor.
103. Introduction to Interpersonal Communication. (3) The theoretical study of what makes people relate and the practical application of these concepts in an experiential environment. Open to freshmen.
130. Introduction to Theatre. (3) A study of the nature of drama, important plays, and their presentation in various media. Open to freshmen.
131. Theatre Laboratory. (0-3) Provides experience in theatrical performance and production activities including directing, management, technical production, lighting, stage design, costuming, makeup, acting and theatre management. Open to all students with consent of instructor.

150. Introduction to Film. (3) Study of the nature and development of film as a distinctive medium of communication, and as an art form. Open to freshmen.
160. Speech and Human Behavior. (3) The study of man as a complex communicator who through physical, behavioral and linguistic signs sends and receives messages in a variety of social and cultural interactions. Open to freshmen.
231. Theatre Production. (3) Play analysis, fundamentals of acting, directing, staging, lighting, costuming, makeup, theatre organization, and theatre management, especially geared toward educational theatre. Prerequisite: sophomore standing. Open also to second semester freshmen with consent of instructor.
232. Introduction to Acting. (3) Exploration of the actor's self through exercises and improvisations to enhance concentration of attention, observation, imagination and sensory responsiveness. Prerequisite: sophomore standing. Open also to second semester freshmen with consent of instructor.

ZOOLOGY 970

101. Animal Biology (5) Chemical and cellular organization and operation; animal organ systems; development and heredity; origin of life and animal evolution; animal associations and ecology; animal types and their relationships.
103. Man in the Natural World. (3) Major topics are current biological problems--their origins, interrelationships and control. Sufficient



background will be provided for an understanding of man's biological relationship to his environment. Topics include: population genetics, environmental pollution, human evolution, world food resources, population control, insecticides, war. Course partially fulfills the natural science requirements at most colleges and universities.

250. Principles of Ecology. (3) A study of the relationships of organisms, singly and in groups, with their environment. Topics include: physical and behavioral adaptations of organisms, populations and their regulation, communities and ecosystems, plant and animal distribution, and man's position within the environment. Prerequisite: course in biological sciences or consent of instructor.