Sophomore standing. is required. Prerequisites: BIOL 051 and BIOL 061. Recommended: liberal arts. In addition to lecture, one-three hour laboratory per week students concentrating on biological sciences, medical sciences and behavior and function of genetic material. This basic course is for Emphasis of study is heritable variations and their relation to structure, biological Sciences Courses

**BIOL 101. Genetics. 5 Units.**
Emphasis of study is heritable variations and their relation to structure, behavior and function of genetic material. This basic course is for students concentrating on biological sciences, medical sciences and liberal arts. In addition to lecture, one-three hour laboratory per week is required. Prerequisites: BIOL 051 and BIOL 061. Recommended: Sophomore standing.

**BIOL 111. Anatomy and Physiology. 4 Units.**
This lecture and laboratory course covers the structure and function of the major physiological systems of the human body, and it is intended primarily for students in the Dental Hygiene program. Students taking BIOL 111 do not receive credit for either BIOL 071 or BIOL 081. Prerequisites: BIOL 051 and BIOL 061.

**BIOL 122. Principles of Immunology. 4 Units.**
The fundamental properties of antigens and antibodies are covered with an emphasis on the theories of antibody production, tolerance, transplantation immunity, autoimmunity and tumor immunology. Prerequisites: BIOL 101 and CHEM 121.

**BIOL 124. Cancer Biology. 4 Units.**
The course examines the morphological and molecular events that accompany the changes of a normal mammalian cell into a cancer cell, with an emphasis on the major pathways that affect cell growth and division, cell communication, cell death and metastasis. Prerequisite: BIOL 101.

**BIOL 126. Neurobiology. 4 Units.**
This course focuses on the molecular and cell biology of neuronal function and development, and how neurons work together to retrieve and process information and respond accordingly, with thorough discussions of sensory and motor systems and a brief review of more complex brain functions, such as emotions, speech and language, and memory. Prerequisites: BIOL 051 and BIOL 061.

**BIOL 128. Histology. 4 Units.**
A study of the tissues which comprise the organs of the body is the focus. This course is limited to human tissues. Thin sections of organs will be studied and their structure related to function. Credit only given once for BIOL 128 or BIOL 129. Prerequisites: BIOL 051 and BIOL 061.

**BIOL 129. Histology Online. 3 Units.**
This is a non-lab, online version of BIOL 128. Credit is only given once for BIOL 128 or BIOL 129. Prerequisites: BIOL 051 and BIOL 061. Recommended: BIOL 101.

**BIOL 130. Plant Kingdom. 4 Units.**
Through lectures, laboratories and field trips, students are introduced to the morphology, reproduction biology and environmental requirements of all major groups of plants. Included are material bearing on the evolutionary relationships within and between each major group. Individual projects are required. Prerequisites: BIOL 051 and BIOL 061. (ENST)

**BIOL 134. Comparative Physiology. 4 Units.**
This course is a detailed review of organ function in diverse groups of organisms. Emphasis is on physiological adaptation to the environment. Prerequisites: BIOL 051 and BIOL 061.

**BIOL 145. Microbiology. 5 Units.**
The biology of microorganisms is studied with emphasis on viruses, bacteria, fungi and protozoa. In addition to lecture, one three-hour laboratory per week is required. Prerequisites: BIOL 051, BIOL 061; CHEM 025, CHEM 027.

**BIOL 146. Industrial Microbiology. 4 Units.**
An in-depth knowledge of the industrial applications of microorganisms. The course uses an understanding of microbial physiology and genetics to illustrate how these organisms are utilized to create commercial products ranging from medicines to food products. Prerequisite: BIOL 145.
BIOL 147. Medical Microbiology. 4 Units.
Medical microbiology covers a survey of microorganisms implicated in human disease; emphasis on characteristics and properties of microorganisms, chiefly bacteria and fungi which are responsible for pathogenesis. Laboratory includes methods of isolation, characterization, and identification of bacteria and fungi responsible for human disease. Prerequisites: BIOL 145 and CHEM 121 with a C- or higher or permission of instructor.

BIOL 151. Parasitology. 4 Units.
Principles of parasitism as well as biology of animal parasites with special emphasis on the protozoa, platyhelminths, nematodes, acanthocephala and arthropods are studied. Techniques of recovery of parasites from various vertebrate hosts are introduced including staining, mounting and identification. Prerequisites: BIOL 051, BIOL 061, BIOL 101. (ENST)

BIOL 153. Cell Biology. 4 Units.
Cell Biology studies cell structure and function with emphasis on the dynamic nature of the cellular environment and the methodologies of cell biology. The experimental basis of our present understanding of the cell is also stressed. Prerequisites: BIOL 051, BIOL 061, BIOL 101, CHEM 025 and CHEM 027. Recommended: Organic chemistry.

BIOL 155. Biological Electron Microscopy. 4 Units.
The process and techniques involved in examining biological specimens with the transmission electron microscope will be covered in detail. When competence in specimen processing is achieved, each student performs an original experiment as a term project. Prerequisites: BIOL 051, BIOL 061, CHEM 025, CHEM 027. Recommended: BIOL 101.

BIOL 157. Topics in Biomedical Research. 4 Units.
Basic research in the areas of cell biology, biochemistry, molecular biology and physiology are examined in their applications to current problems in medicine. Topics covered include genetic engineering, gene therapy, transplants and cloning. Prerequisites: BIOL 051, BIOL 061, BIOL 101; CHEM 121.

BIOL 158. Computerized Data Acquisition. 4 Units.
This lecture and laboratory course introduces students to experimental design and protocol. Students are trained in the programming and use of the computer data acquisition program LabVIEW, then apply the program to an intensive, team-based research project studying amphibian reproductive behavior. The class ends with a symposium-style presentation of each team’s experiments and results. Prerequisites: BIOL 051 and BIOL 061.

BIOL 159. Molecular Biological Techniques. 4 Units.
This advanced laboratory course in the methods of molecular biology, has an emphasis on modern techniques and their application in the laboratory. Topics covered include gene cloning, protein expression systems, nucleic acid isolation and purification, and basic methods of bioinformatics. Prerequisites: BIOL 101 and CHEM 121 with a "C-" or higher.

BIOL 162. Comparative Vertebrate Anatomy. 5 Units.
The evolution of vertebrate organ systems as revealed by comparative morphology are emphasized. Prerequisites: BIOL 051 and BIOL 061. Recommended: BIOL 101.

BIOL 165. Embryology and Development. 4 Units.
This laboratory course focuses on the events that occur as a single-celled embryo develops into an adult organism. Developmental processes are studied at the descriptive and mechanistic levels, leading to an understanding of how and why complex structures are produced. Major emphases is placed on animal embryology (both vertebrate and invertebrate) leading to the production to tissues, organs and organ systems. Later developmental processes also are studied, as well as sex determination. Additional topics include cancer and evolution as seen in the context of development. Prerequisites: BIOL 051, BIOL 061, BIOL 101.

BIOL 169. Elements of Biochemistry. 4 Units.
The field of biochemistry is the focus in this non-lab course that is designed as a preparation for students who will attend a Pharmacy or Dental School. Topics include nucleic acid and protein structure and synthesis, intermediary metabolism, enzyme action, and synthesis and degradation of important biological molecules. The relationship of biochemistry, nutrition, and human disease is discussed. This course does not count for the Biochemistry major. Prerequisites: BIOL 051, BIOL 061, BIOL 101, CHEM 123 with a "C-" or higher.

BIOL 171. Methods in Field Biology. 4 Units.
A course focused on methods of biological investigation with emphasis on modern field sampling techniques and instrumentation. Students are trained in experimental design and quantitative data analysis used to address a range of biological questions. Prerequisites: BIOL 051 and BIOL 061 with a "D" or better. (ENST)

BIOL 175. Ecology. 5 Units.
The structure and dynamics of populations, biotic communities and ecosystems, is emphasized with particular focus upon relationships of organisms to their environments. Prerequisites: BIOL 051 and BIOL 061. (ENST)

BIOL 176. Ecology and Conservation Biology. 4 Units.
The principles of ecology are introduced with attention to consider threats and disruptions to ecological systems from the level of local populations through ecosystems, landscapes, and global processes. Ecological principles are used to help understand these systems, to make predictions for the future or for other systems, and to evaluate possible solutions. The class considers the importance of economic and demographic forces in causing conservation problems and in shaping conservation strategies, and students practice planning conservation areas. Prerequisite: BIOL 051. (ENST)

BIOL 177. Natural Medicines. 4 Units.
A lab course that surveys drugs found in nature, in particular their history, uses, and mode of action, and is designed as a preparation for students who will attend a Pharmacy or Dental School. Topics include history of medicine, survey of natural compounds relevant to pharmacology, and survey of naturally-derived drugs used to treat cancer, heart disease, and neurological disorders. Prerequisites: BIOL 051, BIOL 061, BIOL 101, CHEM 123 with a "C-" or higher.

BIOL 179. Evolution. 4 Units.
Lectures and readings on the mechanisms of evolutionary change in organisms are the focus. Prerequisites: BIOL 051 and BIOL 061. Recommended: BIOL 101.

BIOL 182. Medical Endocrinology. 4 Units.
This lecture and laboratory course presents the fundamentals and current topics in human endocrinology. The subject is examined from a medical and clinical perspective, including "virtual" patients. Prerequisites: BIOL 051, BIOL 061, CHEM 025 and CHEM 027. Recommended: BIOL 071 or BIOL 081.
BIOL 185. Comparative Animal Behavior. 4 Units.
The ecology and evolution of animal behavior are discussed. Laboratory
involves a quantitative study of animal behavior at Micke Grove Zoo.
Prerequisites: BIOL 051 and BIOL 061. Junior standing in Biological
Sciences or Psychology.

BIOL 186. Hormones and Behavior. 4 Units.
This lecture/discussion course focuses on the bidirectional interactions
between an animal's behaviors and its endocrine system. Topics
include: overview of the vertebrate endocrine system, courtship and sex
behaviors, parent behavior, pheromonal communication, aggression
and other social behaviors, learning and memory, hunger, stress, and
biological rhythms. Prerequisites: BIOL 051 and BIOL 061.

BIOL 191. Independent Study. 2-4 Units.

BIOL 197. Undergraduate Research. 1-4 Units.

BIOL 222. Immunology. 4 Units.
Students study immunoglobin structure, function, and expression
in animals. Molecular and cellular aspects of humoral immune
response, cell-mediated immunity, complement system, autoimmune
diseases, tolerance induction, transplantations, cancer immunity,
vaccines, and cytokine activities are also emphasized. Graduate standing.

BIOL 224. Cancer Biology. 4 Units.
The course examines the morphological and molecular events that
accompanied the change of a normal mammalian cell into a cancer cell,
with an emphasis on the major pathways that affect cell growth and
division, cell communication, cell death and metastasis.

BIOL 226. Neurobiology. 4 Units.
The course focuses on the molecular and cell biology of neuronal
function and development, and how neurons work together to retrieve
and process information and respond accordingly. It involves thorough
discussions of sensory and motor systems and a brief review of more
complex brain functions, such as emotions, speech and language, and
memory.

BIOL 234. Comparative Physiology. 4 Units.
This course offers a detailed review of organ function in diverse groups
of organisms. Emphasis is on physiological adaptation to the environment.
Graduate standing.

BIOL 244. Developmental Biology. 4 Units.
Students examine the genetic control of development and the
physiological mechanisms involved in fertilization and differentiation.
Graduate standing.

BIOL 246. Industrial Microbiology. 4 Units.
An in-depth knowledge of the industrial applications of microorganisms.
The course uses an understanding of microbial physiology and genetics
to illustrate how these organisms are utilized to create commercial
products ranging from medicines to food products. Prerequisite: BIOL 145.

BIOL 247. Medical Microbiology. 4 Units.
This course content is the same as BIOL 147 with three additional hours
per week of seminar and/or special project. Graduate standing.

BIOL 251. Parasitology. 4 Units.
This course content is the same as BIOL 151. Principles of parasitism,
biology of animal parasites with special emphasis on the protozoa,
nematodes, helminths, acanthocephala, and arthropods are covered
with three additional hours per week of seminar and/or special project.
Graduate standing.

BIOL 253. Cell Biology. 4 Units.
This course content is the same as BIOL 153. Students take an in-depth
look at the structure and function of a cell with an emphasis on the
methodologies of Cell Biology. Research-based current understanding
of the topics is stressed and a special project is required. Graduate
standing.

BIOL 255. Biological Electron Microscopy. 4 Units.
This course content is the same as BIOL 155. The processes and
techniques involved in examining biological specimens with the
transmission electron microscope are covered in detail. When
competence in specimen processing is achieved, each student performs
an original experiment as a term project. Graduate standing.

BIOL 259. Molecular Biological Techniques. 4 Units.
This is an advanced laboratory course in the methods of molecular
biology, with emphasis on modern techniques and their application in
the laboratory. Topics covered include gene cloning, protein expression
systems, nucleic acid isolation and purification, and basic methods of
bioinformatics. Graduate standing.

BIOL 271. Methods in Field Biology. 4 Units.
This is a course focused on methods of biological investigation with
emphasis on modern field sampling techniques and instrumentation.
Students are trained in experimental design and quantitative data
analysis used to address a range of biological questions. Graduate standing.

BIOL 279. Evolution. 4 Units.
This course content is the same as BIOL 179 and a special project is
required. Graduate standing.

BIOL 291. Independent Study. 2 or 4 Units.

BIOL 295. Graduate Seminar. 4 Units.

BIOL 297. Graduate Research. 1-6 Units.

BIOL 299. Thesis. 2 or 4 Units.

Communication Courses
COMM 114. Argumentation and Advocacy. 4 Units.
Students are introduced to the theory and practice of argumentation,
which is a method of decision-making emphasizing reason giving
and evidence. The course includes instruction in debating, research,
and critical writing, as well as advanced topics in the study of public
deliberation. Prerequisites: COMM 027 or COMM 031 or COMM 043 or
COMM 050, with a grade of C or higher. (PLAW)

COMM 116. Rhetorical Theory and Criticism. 4 Units.
The focus of this class is to help students derive insight into how
symbolic processes affect human awareness, beliefs, values, and actions.
The course treats criticism and analysis as methods of inquiry into the
nature, character, and effects of human communication. It addresses
various methods of rhetorical criticism in terms of their central units of
analysis and typical intellectual concerns. Prerequisite: COMM 160 or
permission of the instructor.

COMM 117. Public Advocacy. 4 Units.
This course teaches the principles of persuasion in public contexts in the
U.S. (types and characteristics of public audiences, official and unofficial
advocacy campaigns, and media framing of public issues) from historical
and theoretical perspectives. The focus is to make students aware of the
constraints and opportunities in public advocacy arguments and their
public dissemination. (ENST, GE1A)
COMM 131. Media Production. 4 Units.
Practical and theoretical application of audio and video production techniques are covered in this course with an emphasis on aesthetic qualities of sight and sound productions. Some work involves student media facilities. A Lab fee is required. Prerequisite: COMM 031 or permission of instructor. (FILM)

COMM 132. Writing for Media. 4 Units.
Examination and production of electronic and print writing techniques are studied in this course with an emphasis on writing news, information, and entertainment messages for the electronic and print industries. Some work involves student media facilities. A lab fee is required. Prerequisite: COMM 031.

COMM 133. Documentary Film as Persuasive Communication. 4 Units.
This course is a survey of documentary film beginning at the turn of the century and continuing through contemporary productions from a historical and rhetorical perspective. Students explore documentary film's origins and trace out its development in relation to its use and reception as students become familiar with the history of the documentary, the evolution of the genre, its rhetorical construction and its cultural influences. (DVSY, ETHC, FILM)

COMM 134. Documentary Film Production. 4 Units.
This course is a field video production course in documentary production. Through a series of assignments, lectures and screening students learn the basics of video production for documentary style productions. This includes research, management, pre-production, production and post-production processes. Students work primarily within groups to produce documentary projects using digital production equipment and techniques. There are no prerequisites for this course. (FILM)

COMM 135. Principles of Public Relations. 4 Units.
Principles and methods of public relations are discussed and analyzed. Study of the mass media as publicity channels acquaints the students with the nature of the media, its limitations, and uses. Case studies involve students in practical application of public relations activities. Prerequisite: COMM 031.

COMM 137. Public Relations Case Studies and Problems. 4 Units.
This is an advanced course in public relations. The course engages students in case study research and application of public relations principles. There is both written and oral presentations with adherence to professional standards of excellence. Prerequisite: COMM 135.

COMM 139. Theory of Mass Communication. 4 Units.
An overview of major theories and research in mass communication is presented. Application of theories that explain and predict communication effects of political campaigns, advertising, entertainment, and information are discussed. Theoretical areas that are covered include socialization, information, diffusion, advertising, persuasion, and uses and gratification's research in addition to the discussion of the state, function, and form of theory in mass communication. Prerequisite: COMM 160 or permission of instructor.

COMM 140. Writing for Public Relations. 4 Units.
Theory and practice in public relations writing in the context of publicity are emphasized. Students learn the write news releases, backgrounds, business letters and feature stories. Prerequisite: COMM 135.

COMM 143. Intercultural Communication. 4 Units.
This course analyzes the major variables affecting interpersonal communication between persons of different cultural backgrounds. (DVSY, ETHC, GE1C)

COMM 145. Human Communication Theory. 4 Units.
Contemporary understandings of human interaction are studied beginning with epistemological issues as a framework. The course examines theory building, foundation theories of our discipline, and contextual theories.

COMM 147. Nonverbal Communication. 4 Units.
Major dimensions of nonverbal behavior exhibited by human beings in social interactional contexts are examined with special emphasis given to such areas as human proxemics, kinesics vocalics, haptics, and artifactual codes. Prerequisite: COMM 043 or permission of instructor.

COMM 149. Introduction to Organizational Communication. 4 Units.
Students are introduced to both a theoretical and an applied approach to the role of communication in various aspects of organizational functioning, such as motivation, leadership, decision-making, conflict management, message management, etc. Prerequisites: COMM 027 and COMM 043 or permission of instructor.

COMM 150. The Capstone. 4 Units.
This senior level capstone seminar devoted to expanding and applying communication course concepts that students have learned in the communication major and applying this knowledge to contemporary communication issues. Students undertake research projects and employ a variety of communication methodologies and theories to uncover the social, historical and ethical implications of their chosen communication interest. Prerequisites: Senior standing, COMM 025, COMM 027, COMM 031, COMM 043, COMM 050, COMM 145, and COMM 160.

COMM 155. Persuasion. 4 Units.
This course is a survey of social psychological and communication approaches to social influence. Both past and contemporary theorizing is explored, and the methods of empirical research is discussed. Prerequisite: COMM 027 or permission of the instructor.

COMM 156. Public Relations Campaigns. 4 Units.
Building on the skills acquired in previous public relations courses, this course is designed to help students continue to develop and refine their critical and creative thinking in an applied context. Students will research, plan, and design public relations strategies and tactics in the development of a public relations campaign for a real-world client. Prerequisite: COMM 135.

COMM 160. Communication Research Methods. 4 Units.
This course is a study of research methods appropriate for examining communication-related problems. Topics for the course include historical-critical methods, descriptive methods, experimental methods, statistical models for data analysis and research reporting and writing. Prerequisites: COMM 027, COMM 031, COMM 043 with a "C-" or better.

COMM 161. Senior Capstone. 2 Units.
This senior-level capstone course furthers career readiness by focusing on students' transition to employment or graduate school after graduating with the B.A. Students will review what they have learned in the major in light of its applicability in pursuing particular kinds of world or in supporting further studies in graduate school. The goal is for each student to clarify how what they learned can be applied, as well as how to talk and write about it in a clear and informed way to a variety of audiences of potential employers, co-workers and colleagues, and their audiences.
COMM 187. Internship. 2-4 Units.
Experiences in a work setting, are contracted on an individual basis. Internships are awarded on a competitive basis and are limited to the number of placements available. COMM 187 represents advanced internship work involving increased independence and responsibility; a corresponding COMM 087 course or equivalent is a prerequisite. Students may not accumulate for credit more than eight units in any specific internship (a total of four in a COMM 087 course and a total of four in a COMM 187 course). Graded Pass/No credit.

COMM 189. Practicum. 1-4 Units.
This course is non-classroom experience in activities related to the curriculum under conditions that the appropriate faculty member determines. Students register for one of the courses listed below. Courses numbered 189 are similar contexts with a more advanced level of performance and learning expectations compared to courses numbered 089. Note: A student may not accumulate for credit more than eight units in any specific practicum. A total of four in a COMM 089 course and a total of four in a COMM 189 course). Prerequisite: COMM 089.

COMM 189A. Advanced Print Practicum. 1-4 Units.
COMM 189B. Advanced Broadcast Practicum. 1-4 Units.
COMM 189C. Advanced Public Relations Practicum. 1-4 Units.
COMM 189D. Advanced Speech and Debate Practicum. 1-4 Units.
COMM 191. Independent Study. 2-4 Units.
COMM 197. Independent Research. 2-4 Units.
COMM 198B. Broadcast Practicum. 2-4 Units.
COMM 200. Communication and Consulting. 3 Units.
This course explores topics related to the work of communication consultants. Through the course readings, presentations, workshops and other assigned work, students will acquire an understanding of the consulting process, including the role of the consultant, methods for undertaking a needs assessment, strategies for conducting training programs, and techniques for evaluating the work of consultants.

COMM 201. Applied Public Relations. 3 Units.
This course examines public relations strategies and tactics, as applicable to politics, non-profits and education. It will explore public affairs, public outreach and crisis management, and prepare students to communicate and utilize public relations with internal and external audiences.

COMM 202. Public Communication Campaigns. 3 Units.
The course is designed to provide a comprehensive overview of communication theory as it relates to attitudes and behavior changes involving public communication campaign issues. The course will also develop an understanding of the application of various quantitative and qualitative research methods to the design, execution, and evaluation of public communication campaigns.

COMM 203. New Communication Technology. 3 Units.
The course is designed to provide a comprehensive overview of a range of new communication technology and to give students basic skills and theoretical principles for their application to public communication through presentations, readings, videos placed on iTunes University and exercises. In addition, the course will enable students to identify, internalize and practice the necessary components of using new media technology for effective public communication.

COMM 204. Media Relations: New Media World. 3 Units.
The purpose of this course is to discuss and debate media relations principles and practices in relation to government, corporations, and public policy. From a scholarly examination of this unique and important form of communication, the course will survey the current trends and issues, and determine the validity of existing theories of media relations management from government, corporate, and community perspectives.

COMM 205. Communication Decision Making. 3 Units.
The purpose of this course is to assess communication strategies in decision making. From a scholarly examination of communication theories and decision making stages, the course will focus on the significance of communicating, administering, and evaluating decision making in professional environments.

COMM 206. Management of Organizational Communication. 3 Units.
This course examines both theoretical and applied approaches concerning the role of communication in various aspects of organizational function, such as motivation, leadership, decision-making, conflict management, and message management.

COMM 207. Advanced Professional Communication. 3 Units.
This advanced course both builds on basic oral and written professional communication skills, and goes well beyond them. The goals of this course are to provide opportunities for students to polish communication skills in different contexts, and to provide practice in and feedback on the interactive communication skills essential to successful professionals.

COMM 214. Argumentation and Advocacy. 4 Units.
This course introduces students to the theory and practice of argumentation, that is a method of decision-making that emphasizes reason giving evidence. The course includes instruction in debating, research, and critical writing, as well as advanced topics in the study of public deliberation. Prerequisites: three courses from COMM 027, 031, 043, 050 with a GPA of 2.5 or better, or permission of the instructor.

COMM 216. Rhetorical Theory and Criticism. 4 Units.
This course strives to help students derive insight into how symbolic processes affect human awareness, beliefs, values, and actions. The course treats criticism and analysis as methods of inquiry into the nature, character, and effects of human communication. It addresses various methods of rhetorical criticism in terms of their central units of analysis and typical intellectual concerns. Prerequisite: COMM 160 or permission of the instructor.

COMM 233. Documentary Film as Persuasive Communication. 4 Units.
This course is a survey of documentary film beginning at the turn of the century and continuing through contemporary productions from a historical and rhetorical perspective. Students explore documentary film's origins and trace out its development in relation to its use and reception as students become familiar with the history of the documentary, the evolution of the genre, its rhetorical construction and its cultural influences.

COMM 237. PR Case Studies and Problems. 4 Units.
This advanced course in public relations engages students in case study research and application of public relations principles. Written and oral presentations with adherence to professional standards of excellence are required. Prerequisite: COMM 135.
COMM 239. Theory of Mass Communication. 4 Units.
This course is an overview of major theories and research in mass communication. Students examine the application of theories that explain and predict communication effects of political campaigns, advertising, entertainment, and information. Theoretical areas covered include socialization, information, diffusion, advertising, persuasion, and uses of gratification's research. The state, function, and form of theory in mass communication is discussed. Prerequisite: COMM 160 or permission of the instructor.

COMM 245. Human Communication Theory. 4 Units.
Students study contemporary understandings of human interaction. Beginning with epistemological issues as a framework, the course examines theory building, foundation theories of our discipline, and contextual theories.

COMM 247. Nonverbal Communication. 4 Units.
The course examines major dimensions of non-verbal behavior exhibited by human beings in social interactive contexts. Special emphasis is given to such areas as human proxemics, kinesics, vocalics, haptics, and artificial codes. Prerequisite: COMM 043 or permission of the instructor.

COMM 249. Introduction to Organizational Communication. 4 Units.
This course takes both a theoretical and an applied approach to introduce the student to the role of communication in various aspects of organizational functioning, such as motivation, leadership, decision-making, conflict management, message management, etc. Prerequisites: COMM 043 and COMM 027 or permission of the instructor.

COMM 255. Persuasion. 4 Units.
This course is a survey of social psychological and communication approaches to social influence. Both past and contemporary theorizing are explored, and the methods of empirical research is discussed. Prerequisite: COMM 027 or permission of the instructor.

COMM 256. Public Relations Campaigns. 4 Units.
Building on the skills acquired in previous public relations courses, this course is designed to help students continue to develop and refine their critical and creative thinking in an applied context. Students will research, plan, and design public relations strategies and tactics in the development of a public relations campaign for a real-world client.

COMM 260. Communication Research Methods. 4 Units.
Students study of research methods appropriate for examining communication-related problems. Topics for the course include historical-critical methods, descriptive methods, experimental methods, statistical models for data analysis and research reporting and writing. A minimum GPA of 2.5 is required. Prerequisites: COMM 027, 031, 043, or permission of the instructor. Recommended for sophomores.

COMM 261. Critical and Qualitative Research Methods. 4 Units.
The course provides a graduate-level introduction to qualitative methods used in communication studies. Topics covered provide an overview of rhetorical analysis, critical and cultural studies, ethnography, and case studies in public relations. The course emphasizes the connection between the theoretical foundations of qualitative inquiry and their applications to communicative interactions. Applications include the writing of criticism, field work in ethnography, and case studies.

COMM 262. Quantitative Research Methods. 4 Units.
This course develops expertise in undertaking quantitative research at the graduate level. The seminar focuses on various quantitative methods, that include content analysis, survey research, experimental design, and scale construction, as well as statistical techniques for analyzing quantitative data.

COMM 271. Graduate Seminar: Rhetorical Thought. 4 Units.
This course provides a graduate level introduction to the theory and practice of rhetorical criticism. The course focuses on the role of the critic and six modes of criticism which are as follows: generic criticism, cluster, narrative criticism, narrative criticism, ideological criticism, metaphorical criticism, and fantasy theme criticism.

COMM 272. Graduate Seminar: Interpersonal Communication. 4 Units.
This course provides the student who has achieved a general understanding of interpersonal communication issues the opportunity to choose and explore a particular area of special interest. The first phase of the course focuses on discussion of several theories of interpersonal behavior. Beginning approximately the fourth week of class, each student brings in and presents two or more abstracts of published articles related to the interest area. The last session(s) provides the opportunity for students to share their conclusions with the others. Each student completes a paper which presents a research proposal in the area of interest. The term paper is due the last scheduled day of classes.

COMM 273. Graduate Seminar: Mass Communication. 4 Units.
The purpose of this course is to provide an introduction to mass communication theory and scholarship from three different scholarly perspectives: the social science or traditional paradigm, the critical theory paradigm, and the ethnographic paradigm. Students are not only exposed to the literature in each of these areas, but they are also asked to conduct small scale studies from two of the three paradigms. Because the class is a seminar, student presentations and discussion are the major activity during class time.

COMM 275. Graduate Seminar: in Public Relations. 4 Units.
The Graduate Seminar in Public Relations is designed through in-depth study and research to formalize understanding of Public Relations: theory and practice, functions in organizations and role in society. Students study concepts and theories related to public relations role in social systems. A "mock" APR tests knowledge at the end of the semester with both a written and an oral examination.

COMM 276. Communication in Learning Settings. 4 Units.
This graduate seminar is designed to develop knowledge of current communication education research and effective communication strategies for teaching undergraduate courses in communication.

COMM 277. Media Relations. 4 Units.
This course is to discuss and debate media relations, principles, and practice.

COMM 278. Political Communication. 4 Units.
This course is designed to provide a grounding in rhetorical approaches to persuasion in a political context, to acquaint students with the range of political ideologies, and to examine the theoretical and pragmatic opportunities and obstacles to advocacy in the current mediated content of national, regional, or local politics.

COMM 279. Visual Communication. 4 Units.
This course investigates the persuasive influence of decoding visual images, advertising, public relations, political campaigns, public memory, and popular culture. Historical and theoretical aspects of visual communication will be studied in this course. Critical analysis methods and ethical implications of electronic and print media images will be discussed.
opportunities.
and programs, and legal observations in San Joaquin County courtrooms
In-class oral arguments using relevant case law, review of local facilities
practically apply circumstance to the law and risk management planning.
apply. This course is taught combining lecture, class discussions, and
specific topics to which legal principles and risk management strategies
parts. Part I introduces basic concepts of the legal system and reviews
and exercise science professionals. This course is divided into two
HESP 110. Health and Exercise Science Law. 4 Units.
Sport analytics refers to the use of data and quantitative methods to
measure performance and make decisions to gain advantage in the sport
industry. This course aims to explore recent trends in sport analytics from
a practical point of view, offering students the skills and ideas to create
analytics of potential value to sport organizations. The course content
will cover topics such as data management, statistic data analysis,
modeling, and decision making in various sport settings.
HESP 110. Health and Exercise Science Law. 4 Units.
This course examines legal issues and responsibilities relevant to health
and exercise science professionals. This course is divided into two
parts. Part I introduces basic concepts of the legal system and reviews
general legal principles of tort and contract law. Part II focuses upon
specific topics to which legal principles and risk management strategies
apply. This course is taught combining lecture, class discussions, and
experimentally based assignments designed to develop the ability to
practically apply circumstance to the law and risk management planning.
In-class oral arguments using relevant case law, review of local facilities
and programs, and legal observations in San Joaquin County courtrooms
will supplement course content and offer students “hands on” learning
opportunities.
HESP 120. Instructional Strategies and Methods of Teaching and
Coaching. 4 Units.
This course is designed for the future physical educator or coach to
deliver an effective, meaningful physical education curriculum to a
diverse population of students. Emphasis is on physical education
pedagogy; the skills and techniques that successful teachers use
to ensure student learning. Students engage in guided teaching and
systematic observation experiences at the primary and secondary school
levels in an effort to introduce them to effective teaching and coaching
behaviors.
HESP 121. Analysis of Team and Individual Sports. 3 Units.
This is an applied motor learning approach to skill acquisition for team
and individual sports. In addition to personal skill development, students
learn to prepare the introduction, explanation and demonstration of
sports skills; develop and maintain skill levels through practice
and reinforcement; analyze movement by systematically observing
performance; utilize biomechanical concepts to analyze, correct and
enhance performance and cognitive processes to improve performance.
Ten to 15 different team and individual sports are presented and
instruction time per sport varies. Lab fee required.
HESP 123. Analysis of Nontraditional Games and Sports. 3 Units.
This is an applied motor learning approach to skill acquisition for
nontraditional games and sports. A variety of nontraditional games and
outdoor activities embedded in the CA curriculum framework for physical
education. Clinical experience is provided for secondary students in the
community. Eight to 10 different nontraditional games and sports are
presented and instruction time per sport varies. Lab fee required.
HESP 129. Exercise Physiology. 4 Units.
This course is designed to introduce Health and Exercise Science
students to core physiological concepts relevant to acute and long-
term adaptations to the stress of exercise. An overview of metabolic,
cardiovascular, respiratory, and skeletal muscle adaptations will be
discussed along with special topics such as environmental stressors,
obesity, and nutrition. Outside laboratory assignments are carried out
for the purpose of applying lecture to practice and providing “hands on”
opportunities to develop basic competencies in the interpretation of
laboratory testing in exercise physiology. Lab fee required.
HESP 131. Assessment and Evaluation. 4 Units.
This course is the development of competencies of Health, Exercise and
Sport Sciences majors for the design and implementation of procedures
to appropriately measure and evaluate students, clients and/or programs.
Basic data acquisition methods and statistical analysis techniques are
presented. A Lab fee is required.
HESP 133. Kinesiology. 4 Units.
This course is a functional study of musculoskeletal anatomy and its
relationship to human movement, posture, exercise prescription,
and rehabilitation. Prerequisite: BIOL 011 or BIOL 051 or BIOL 061 or
permission of instructor, and lab fee required.
HESP 135. Exercise Metabolism. 4 Units.
This course provides a thorough study of the principles of nutrition
as they relate to health of individuals who participate in sports or
physical activity. Topics include calculating energy balance and the
role of carbohydrates, lipid, protein, vitamins, minerals and water
in sports performance. The application of these topics for optimal
metabolic functioning to a variety of physical activities is also presented.
Prerequisites: HESP 129; BIOL 011 or BIOL 061.
HESP 137. Psycho-Social Aspects of Health Care. 4 Units.
Students study comprehensive, integrated coverage of psychosocial topics in healthcare involving clients, families, and other caregivers affected by pathology, impairment, functional limitations, and/or disability. This course will have a broad coverage of topics in healthcare including multicultural issues, spirituality, chronic condition, abuse/neglect, and PTSD. Emphasis will be placed on current, evidence-based literature, connecting theory to practice.

HESP 139. Exercise Psychology. 4 Units.
This course employs the theories and methods of psychology to examine the related fields of competitive sports, fitness, exercise, and rehabilitation from injury. Major questions addressed in the course include: How do psychological factors influence participation in physical activity and performance of the individual? How does participation in physical activity or incapacity due to an injury affect the psychological make-up of the individual? These questions are explored from educational, coaching, research, and clinical perspectives.

HESP 140. Sport and Globalization. 3 Units.
This course examines the interaction between sport and globalization. Globalization and its underlying forces are explored as well as the manner in which sport and these global forces interact. The course then explores the structure, governance, and politics of global sport. Special attention is given to the processes that facilitate and impede globalization and the role sport plays in the development of societies, ideologies and everyday life. (DVSY, ETHC, GE1B, GEND)

HESP 141. Sport, Culture and U.S. Society. 4 Units.
This course is designed to explore the relationship between sport, culture and society in both the USA and the broader global world. Students learn to critically examine a wide range of topics that include, but not limited to, sport and gender, sport and race, global sports worlds, drugs and violence in sport, sport and politics and the crime-sport nexus. The intention of this course is to develop the student’s sociological imagination and encourage the student to think critically about the role sport plays in various domains of society. (DVSY, ETHC, GE1B, GEND)

HESP 142. Sport and Globalization. 3 Units.
This course examines the interaction between sport and globalization. Globalization and its underlying forces are explored as well as the manner in which sport and these global forces interact. The course then explores the structure, governance, and politics of global sport. Special attention is given to the processes that facilitate and impede globalization and the role sport plays in both. The course also extensively covers the consequences resulting from the reciprocal relationship between sport and globalization.

HESP 143. Prevention and Acute Care of Injury and Illness. 4 Units.
This course provides an overview of the field of Athletic Training, its organization, and the responsibilities of a Certified Athletic Trainer (AT) as part of the sports medicine team. Instruction emphasizes prevention, recognition, and immediate care of injuries and illnesses associated with physical activity. This course is recommended for freshmen.

HESP 144. Therapeutic Modalities. 4 Units.
This course is a lecture and laboratory experience designed to expose the student to the theory, principles, techniques and application of therapeutic modalities pertaining to the treatment of athletic or activity related injuries. Topics include discussions of the physiological effects, indications, contra indications, dosage and maintenance of each modality. Recommended: BIOL 081. Lab fee is required. Junior standing.

HESP 146. Health, Disease, and Pharmacology. 4 Units.
This course is an in-depth exploration of physical, mental, and social health with specific emphasis on recognizing the signs, symptoms, and predisposing conditions associated with the progression of specific illnesses and diseases as they relate to the physically active individual. Students also develop an awareness of the indications, contraindications, precautions, and interactions of medications used to treat those illnesses and diseases.

HESP 147. Muscle Physiology. 4 Units.
This course is focused on skeletal muscle physiology. Topics include the structure and function of muscle tissue, protein synthesis, cell signaling cascades, the specificity of adaptation, enzymes and their roles in metabolism, endocrine function, anabolic steroids, muscle damage, inflammatory physiology, neuromuscular principles (e.g., size principle), and the mechanisms of muscle fatigue. Laboratory assignments focus on skeletal muscle testing and evaluation. Prerequisite: HESP 129 and upper-division class standing. Lab fee required.

HESP 149. Clinical Evaluation and Diagnosis I. 3 Units.
This course presents an in-depth study of musculoskeletal assessment of the lower extremity, cervical spine, head and face for the purpose of identifying (a) common acquired or congenital risk factors that would predispose an individual to injury and/or (b) musculoskeletal injury common to athletics or physical activity. Students receive instruction in obtaining a medical history, performing a visual observation, palpating bones and soft tissues, and performing appropriate special tests for injuries and conditions of the foot, ankle, lower leg, knee, thigh, hip, pelvis, lumbar and thoracic spine. This course is directed toward students who pursue athletic training and/or physical therapy professions. Prerequisite: HESP 133 or BIOL 071, and a lab fee is required.

HESP 150. Clinical Evaluation and Diagnosis II. 3 Units.
This course presents an in-depth study of musculoskeletal assessment of the upper extremity, cervical spine, head and face for the purpose of identifying (a) common acquired or congenital risk factors that would predispose an individual to injury and/or (b) musculoskeletal injury common to athletics or physical activity. Students receive instruction in obtaining a medical history, performing a visual observation, palpating bones and soft tissues, and performing appropriate special tests for injuries and conditions of the shoulder, upper arm, elbow, forearm, wrist, hand, fingers, thumb, cervical spine, head, and face. This course is directed toward students who pursue athletic training and/or physical therapy professions. Prerequisites: HESP 149; HESP 133 or BIOL 071. Lab fee is required.

HESP 151. Elementary Physical Education. 3 Units.
This course is designed to prepare students for employment in an elementary school setting and provide them with the tools necessary to formulate and implement a comprehensive elementary PE experience for all students. Participants learn a wide range of teaching skills that facilitate the ability to create a quality active learning environment in elementary PE. Students explore effective teaching and assessment strategies, classroom management skills, the use of constructive feedback, the negotiation of diverse classrooms and the development of appropriate student learning outcomes. Students also are introduced to the subject matter of elementary PE and will undertake several teaching episodes. This course encourages students to engage in reflexive teaching practices, develop physically educated young people, maximize student involvement and enjoyment in PE and integrate core curriculum subject matter into PE lessons.

HESP 152. Secondary Physical Education. 4 Units.
This course is designed for junior/senior level students in the Sport Sciences/Sport Pedagogy concentration to deliver an effective, meaningful physical education curriculum to diverse students. This course covers curriculum components that include content, content organization, distinctive curriculum models and aspects of curriculum application. Students learn how to sustain a positive learning experience, conceive and plan meaningful curricula for school based instruction, and link the school program to opportunities for adolescents outside of school. Prerequisites: HESP 121, HESP 123, HESP 151.
This course is designed to provide students with the theoretical and practical tools necessary to teach Physical Education (PE) and Sport across diverse settings. Students learn a wide range of teaching skills that facilitate their ability to create an inclusive learning environment in PE and Sport. Students explore a variety of adapted motor skills activities, federal/state legislative mandates and related polices, effective pedagogical and assessment strategies, classroom management skills, the use of constructive feedback and the development of appropriate student learning outcomes within diverse classrooms. Students undertake a number of peer-to-peer teaching episodes and apply principles learned in the classroom setting to real-world contexts. The course also encourages the students to engage in reflexive teaching practices, develop inclusive motor skill instruction lessons sensitive to diversity issues and maximize student involvement and enjoyment in PE and Sport. Fieldwork requires clearance for local school districts (clear LiveScan fingerprint screening and negative TB test results). (DVSY)

HESP 155. Motor Development and Learning. 3 Units.
This course examines aspects of skilled performance and motor learning from a developmental perspective. It is concerned with the major principles of human performance and skill learning, the progressive development of a conceptual model of human actions and the development of skill through training and practice. Topics include human information processing, decision-making and movement planning, perceptual processes relevant to human movement, production of movement skills, measurement of learning, practice design, preparation, organization, and scheduling; use of feedback, in addition to the application of motor learning principles to sport, physical education, industrial and physical therapy settings. Fieldwork requires clearance for local school districts (clear LiveScan fingerprint screening and negative TB test results).

HESP 157. The Clinician in Health and Exercise Science. 4 Units.
This course integrates theory and practice and requires students to develop a research topic, consistent with an explicitly and narrowly defined area of interest. Permission of the instructor is required.

HESP 159. Health Optimizing Physical Education. 3 Units.
This course introduces prospective physical education teachers to the principles and components of health-related fitness, appropriate curriculum for K-12 programming, comprehensive school and community-based physical activity planning, effective teaching principles, behavior change strategies, and advocacy approaches of physical activity and fitness. Prerequisites: HESP 131 and HESP 151.

HESP 160. Principles of Coaching. 3 Units.
This course is designed as an introduction to the principles of athletic coaching for modern day athletes. Emphasis is on a holistic approach to the theories, knowledge, and practices of coaching sport as prescribed by the National Standards for Sport Coaches. This course will explore coaching at various levels. Topics will include developing a coaching philosophy, evaluating theories in student-athlete motivation, understanding team dynamics, leadership, administration responsibilities, and improving player performance.

HESP 161. Biomechanics of Human Movement. 4 Units.
This course is an introduction to the biomechanics of human movement and the analytic procedures and techniques for subsequent application in the sport sciences and related fields. The course includes a review of basic functional/mechanical human anatomy and kinesiology. Outcome objectives are an understanding of mechanical principles governing human movement, skill in use of a variety of measurement techniques commonly applied in biomechanics, an ability to analyze motor skill performance via cinematographic/computer methodologies and skill in prescriptively communicating results of analysis. Prerequisite: BIOL 011 or BIOL 051 or BIOL 061 or permission of instructor, and a lab fee is required.

HESP 163. Therapeutic Exercise and Rehabilitation. 4 Units.
This course is an application of the theory and principles associated with therapeutic exercise and the application of various rehabilitation techniques and procedures during the course of an athlete's rehabilitation to attain normal range of motion, strength, flexibility, and endurance. Prerequisite: BIOL 071; HESP 133 or permission of instructor, and a lab fee is required.

HESP 165. Legal Aspects of Health, Exercise and Sport. 4 Units.
This course addresses legal issues and responsibilities relevant to professionals in the areas of health and exercise science, sport management, sport pedagogy and athletics. General legal principles supported by case law in such areas as negligence, contract law, constitutional law, antitrust laws and unlawful discrimination are offered. (PLAW)

HESP 166. Introduction to Sport Management. 4 Units.
This course is for beginning sport management students and students interested in sport business. Students study general academic, managerial, and business concepts related to sport and explore the variety of sport and fitness-related businesses and organizations within the public and private sectors. Potential career opportunities are considered.

HESP 167. Managing Sport Enterprises. 4 Units.
The purpose of this class is to introduce students to management and leadership in the sport industry. The unique attributes and structures of sport organizations will be explained. The course then covers multiple frames of organizational analysis and applies these to sport settings. In addition, students learn managerial and leadership skills and develop a management philosophy suited to the sport industry. Prerequisites: HESP 167 and HESP 187A.

HESP 171. Sport Economics and Finance. 4 Units.
This course is designed to address the respective areas of sport economics, finance, and labor relations. Both theoretical and practical aspects are explored. Students examine sport as a multi-billion dollar industry and analyze the role of sport within the larger socio-economic structure within the United States and internationally. Prerequisites: ECON 053 and BUSI 031. Junior standing.

HESP 172. Case Analysis in Sport and Fitness Management. 4 Units.
This course addresses the principles and practices pertinent to the development and operation of the private and commercial sport or fitness enterprise. The case study method focuses on designing and implementing the prospectus, feasibility studies, and the analysis of organizational effectiveness. Topics of special interest include the planning and controlling of resources, facility operations, and strategies for production and operations management.
HESP 173. Health Care Management and Professional Development. 4 Units.
This course is an in-depth study of the management of health care organizations related to finances, facilities, equipment, organizations structures, medical/insurance records, risk management, human relations, and personnel. Practical and conceptual skills are taught to help students focus on more efficient health care delivery. Also covered is the development of leadership skills, future trends in health care management, guidelines for designing effective work groups and managing conflict.

HESP 174. Sport Marketing and Promotions. 4 Units.
This course focuses on three main aspects of sports marketing. First, students gain the knowledge necessary to market sport products. Second, the course covers the manner in which sport is used as a marketing tool. Finally, students learn about the variety of forms of public relations that are used by sport organizations. In the process, students become familiar with the role of technology in sport marketing and public relations. Sophomore standing.

HESP 175. Sport Event and Facility Management. 4 Units.
This course is a comprehensive investigation into the principles needed to design, implement, and manage all types of sport events and facilities. Planning, logistics, risk management, human resource management, and marketing of events and facilities are given special attention. Opportunities for the application of these principles are also provided. Prerequisites: BUSI 107 and HESP 174. Junior standing.

HESP 176. Sport Management Capstone. 4 Units.
This class is designed as the integrative pinnacle of the sport management curriculum at Pacific. This integration will occur in several ways. Students will assess critical issues in the sport management field drawing on the expertise gained throughout their Pacific educations. They will also complete comprehensive, immersive assignments that assist local underserved sport organizations. Practitioners from multiple sub-disciplines within the field will also complement instruction in the course. Finally, the course will cover practical skills for career preparation, maintenance, and development.

HESP 177. Cardiovascular Physiology. 4 Units.
This course seeks to fulfill two main objectives: 1) to establish a foundational understanding of clinical cardiovascular physiology and 2) to be able to perform and interpret cardiopulmonary exercise tests to examine cardiac, metabolic and respiratory pathology. Prerequisite: HESP 129 and upper division class standing. Lab fee required.

HESP 179. Introduction to Research. 4 Units.
This course covers the rationale for and status of professional research; research designs and their applicability to students’ disciplines; review, critique and synthesis of selected literature; development of research proposal and pretest of instrument.

HESP 180. Epidemiology. 4 Units.
This course is an introduction to the principles and practice of epidemiology. It explores the history, concepts, and methods of epidemiologic investigation. The statistical models taught in this class include the receiver operating characteristic curve, chi-square test, t-test, binary logistic regression, and linear regression. Students will learn to develop research designs that employ these tests and will be able to conduct them to evaluate patient care, quantify risk, and understand the patterns of illness and disease in populations.

HESP 182. Exercise Testing and Prescription. 4 Units.
This course is primarily designed to provide students with the hands-on training and theoretical background to competently assess levels of wellness/fitness in an “apparently healthy” (i.e. low risk) adult population. The topics and skills addressed include health screening protocols/risk stratification, use of Informed Consent documents, as well as measurement protocols for the health-related components of fitness (i.e. cardiorespiratory fitness, muscular fitness, flexibility, body composition). These skills are then used to prescribe lifestyle and/or exercise modifications that result in individual progress toward a desired goal. The content of this course is highly focused toward the knowledge and skills required for taking the ACSM Fitness Specialist (HFS) certification exam. Prerequisite: HESP 147.

HESP 187. Internship in Health and Exercise Science. 4 Units.
This course provides an opportunity for qualifying students to work in an area of Health and Exercise Science that interests them. Prerequisites: HESP 157, GPA 2.0, no grade below “C-” in major, and approval of course supervisor.

HESP 187D. Sport Pedagogy Internship I. 2 Units.
This class involves the student completing a semester-long internship connected to their chosen field of sport pedagogy. This internship develops their evaluation skills and encourage the student to engage in reflexive teaching practices to better prepare themselves for the challenges and terrain of their post-graduation employment. Prerequisite: HESP 131.

HESP 187E. Sport Pedagogy Internship II. 4 Units.
This class involves the student completing a semester-long internship connected to their chosen field of sport pedagogy. This internship develops their evaluation skills and encourage the student to engage in reflexive teaching practices to better prepare themselves for the challenges and terrain of their post-graduation employment. Prerequisite: HESP 187D.

HESP 187F. Internship. 1-4 Units.

HESP 187G. Internship. 1-4 Units.

HESP 189. Practicum: Coaching. 1 or 2 Unit.
The practicum offers non-classroom experiences in activities related to Sports Sciences, under conditions determined by the appropriate faculty member. HESP 189 represents advanced practicum work involving increased independence and responsibility. Enrollment is limited to eight units maximum of HESP 089/189A, B, C, D, H, J, K offerings and no category within a course may be repeated for credit. A list of specific courses follows. Grading option is Pass/No Credit only.

HESP 189A. Practicum: Adapted Physical Education. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Prerequisite: HESP 169 with a “C-” or better.

HESP 189B. Practicum: Athletic Training III. 4 Units.
This is a clinical education course in the field of athletic training. It incorporates an experiential learning environment designed to prepare students for a career in athletic training. Advanced skills are introduced within the daily operations of the athletic training room and in the care of the athletes. Criteria for progression must be met before enrolling in subsequent practicum course. Prerequisite: HESP 089K.

HESP 189C. Practicum: Biomechanics. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Grading option is Pass/No Credit only.
HESP 189D. Practicum: Exercise Physiology. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Grading option is Pass/No Credit only.

HESP 189E. Practicum: Sport Pedagogy. 2 Units.
This course offers a supervised leadership experience in the elementary or secondary school setting. The student works as a physical education specialist and develops as well as conducts appropriate physical activity programs. Prerequisites: HESP 151 or HESP 159 and permission of instructor.

HESP 189F. Practicum: Coaching. 2 Units.
Students are assigned to an intercollegiate or interscholastic sports team for the semester and participate in practice sessions throughout the specific sport season. Written guidelines are developed cooperatively by the supervisor, coach and student. Prerequisites: HESP 139 and HESP 155.

HESP 189G. Practicum: Coaching. 2 Units.
Students will be assigned to an intercollegiate or interscholastic sports team for the semester and will participate in practice sessions throughout the specific sport season. Written guidelines will be developed cooperatively by the supervisor, coach and student. Prerequisites: HESP 139 and HESP 155.

HESP 189H. Practicum: Sports Law. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Grading option is Pass/No Credit only.

HESP 189I. Practicum: Kinesiology. 2 Units.
These courses provide advanced practicum work in Sport Medicine. See HESP 089 for subcategories and enrollment limitations. Prerequisite: HESP 133 with a "C-" or better. Grading option is Pass/No Credit only.

HESP 189J. Practicum: Athletic Training IV. 4 Units.
This is the fourth in a series of four consecutive clinical education courses in the field of Athletic Training. The course incorporates an experiential learning environment designed to prepare students for a career in Athletic Training. Advanced Athletic Training knowledge and skills will also be introduced within the daily operations of the Athletic Training Facility and your Clinical Assignment and in the care of patients. Prerequisite: HESP 189B.

HESP 191. Independent Study. 1-4 Units.

HESP 193. Special Topics. 1-4 Units.

HESP 195. Ethical Issues in Sport. 3 Units.
The primary goal of this course is to enhance student awareness regarding their values, their evolving moral and ethical codes, and the ways of addressing moral problems. Students examine various ethical theories and questions encountered in the field of Sport Sciences. As part of this course, students need to identify necessary information from various sub-disciplines in order to make professional and ethical decisions. Senior standing.

HESP 197. Independent Research. 1-4 Units.

HESP 200. Advanced Health and Exercise Science Law. 4 Units.
This course examines legal issues and responsibilities relevant to health and exercise science professionals. This course is divided into two parts. Part I introduces basic concepts of the legal system and reviews general legal principles of tort and contract law. Part II focuses upon specific topics to which legal principles and risk management strategies apply. This course is taught combining lecture, class discussion, a written research project, and experientially based assignments designed to develop the ability to practically apply specific circumstances and facts to the law and risk management planning. In-class oral arguments using relevant case law, review of local facilities and programs, and legal observations in San Joaquin County courtrooms will supplement course content and offer students "hands on" learning opportunities.

HESP 233. Advanced Kinesiology. 4 Units.
This course considers the musculoskeletal analysis of human movement, posture, exercise prescription, and rehabilitation. Prerequisite: HESP 133 or permission of instructor. Graduate standing.

HESP 235. Graduate Nutrition/Exercise Metabolism. 4 Units.
Students study the principles of nutrition as they relate to health and participation in sport or physical activity. The course includes calculation of energy needs and expenditures, and the role of carbohydrates, fats, protein, vitamins, minerals, and water in sport and physical activity.

HESP 237. Advanced Sport Psychology. 4 Units.
This course provides a detailed examination of the theories and concepts that explain how the human psyche affects sport performance. Particular emphasis is given to the application of these concepts for coaches and athletes.

HESP 239. Advanced Applied Sport Psychology. 4 Units.
This graduate seminar is designed for advanced students to explore theoretical concepts of psychology as they relate to individual and group behavior in physical activity environments.

HESP 241. Advanced Sociology of Sport. 4 Units.
This graduate seminar deals with theoretical concepts of sociology related to the American sport environment. This course uses a sociological perspective to provide an appreciation of sport as an integral part of our cultural dynamics. The relationship of sport and other social institutions such as media, economy, politics, and education are covered, as well as the relationship of sport and social stratification such as gender, race, and class.

HESP 242. Global Sports Worlds. 4 Units.
Like all social institutions in the United States, global forces are increasingly shaping the sports worlds we live in. Understanding this phenomenon is imperative for future practitioners with sport sciences. This course is designed to explore this relationship between sport and globalization processes. Students learn to identify the characteristics of the sport-globalization nexus and critically examine its consequences. Through a host of experiential learning opportunities, students develop a deeper understanding of the implications of global sports worlds in your field of study. The eight pre-trip meetings take place during the Spring semester(one per week from Spring break onwards). The trip to London is scheduled after these meetings each year. The students register for the class as a Spring course. Travel required. Prerequisite: HESP 279 with a "B-" or better or permission of the instructor. Graduate standing.

HESP 247. Advanced Exercise Physiology. 4 Units.
This course is an advanced study of physiological responses to exercise with emphasis on laboratory methods and procedures for testing and demonstrating these responses for research application. Lab fee is required. Prerequisites: HESP 147 and permission of the instructor.
HESP 248. Applied and Clinical Physiology. 4 Units. 
This course is designed to study the fundamental principles of exercise testing and interpretation for high risk, healthy, and athletic populations. The course is structured to focus on the cardiovascular, metabolic, and pulmonary responses to aerobic exercise and implications for designing training programs to enhance health, fitness, and performance. This course serves as a foundation for clinical exercise science and the use of exercise testing in the study of cardiac, metabolic and respiratory pathology.

HESP 253. Advanced Adapted Physical Education. 4 Units. 
This course provides the culminating learning experience for those teaching credential candidates who are completing the waiver program with an emphasis in adapted physical education. Lab fee required.

HESP 255. Advanced Motor Learning. 4 Units. 
This graduate course examines both the information processing and dynamical systems approaches to the study of human motor behavior and skill acquisition. Content is theoretically and research based with a behavioral emphasis. Topics covered include: variability and motor control, visual control of action, the role of reflexes, task interference, limitations in information processing, effects of stress on performance, and the Schema theory. It is intended to provide students with an advanced understanding of the conceptual, functional properties of the motor system and human motor performance and their application to teaching, coaching, industrial and therapeutic settings.

HESP 257. Advanced Clinician in Sports Medicine. 4 Units. 
This course integrates theory and practice and requires students to develop a research topic, consistent with an explicitly and narrowly defined area of interest. Prerequisite: Permission of instructor.

HESP 259. Professional Preparation in Sport Sciences. 4 Units. 
This course is designed for the future professional practitioner who wishes to deliver an effective, meaningful clinical or educational experience to a diverse population. The course helps them sustain the experiences through the knowledge to conceive and plan meaningful programs, the administrative skill to produce an organizational structure within school and/or practicum that optimizes the impact of the program, and the creative energy to link the program to opportunities for children and adults. Students engage in an in-depth study of the research on teaching and the application of research-based knowledge to the teaching and clinical professions.

HESP 261. Advanced Biomechanics of Sport. 4 Units. 
This course is an advanced study of mechanical principles which influence human movement. Both non-cinematographic and cinematographic/vidiographic techniques are used to analyze and evaluate motor skills and errors in performance and critical evaluation of current research findings in biomechanics. Lab fee required. Prerequisite: an undergraduate course in kinesiology or biomechanics or permission of instructor.

HESP 265. Advanced Sports Law. 4 Units. 
This course addresses legal issues and responsibilities relevant to professionals in the areas of sports medicine, sport management, sport pedagogy and athletics. General legal principles supported by case law in such areas as negligence, contract law, constitutional law, antitrust laws and unlawful discrimination are offered.

HESP 269. Advanced Management of Sport Enterprises. 4 Units. 
The purpose of this class is to prepare graduate students to lead in the unique business environment of sport. The unique governance structure of intercollegiate athletics and professional sports is presented. Students then develop a multi-frame approach to management of sport organizations. Students also explore the subjective nature of leadership to develop a style best suited for sport. Emphasis is placed on the integration of applied research that uses leadership and management theories.

HESP 272. Advanced Case Analysis of Sport and Fitness Management. 4 Units. 
This graduate seminar is designed to provide breadth and depth of topical knowledge beyond that covered in the introductory course.

HESP 274. Advanced Sport Marketing and Promotions. 4 Units. 
This course provides an in-depth study of the unique nature of sport marketing that focuses on three areas. Students learn how to market sport products and events. The course explores the many mechanisms through which sport is used as a marketing tool. Finally, students learn to gain maximum benefit from the relationship between sport and the media.

HESP 275. Advanced Sport Management. 4 Units. 
This class provides graduate students with the knowledge base necessary to lead the mega-events and manage multipurpose and single-use facilities common in sport. The first portion of the course is devoted to event planning, marketing and execution. The second part of the course focuses on planning, design and maintenance of sports facilities. Special attention is given to the environmental impact of sporting events and facilities.

HESP 279. Research Methods in Sport Sciences. 4 Units. 
This in-depth evaluation of the various methods used in the disciplines of the sport sciences, includes experimental, descriptive, qualitative and historical approaches. Students learn the means of selecting a research problem and planning its solution as well as important considerations to regard in reviewing the literature. The course also includes an overview of proper form and style in research writing. Student must complete a fully developed Research Proposal as part of this course. Prerequisite: a course in statistics. Graduate standing.

HESP 287. Advanced Internship: Sport Medicine. 4 Units. 
This course provides an opportunity for qualifying students to work in an area of sports medicine that interests them. Prerequisites: HESP 257 with a "C" or better and permission of instructor. Graduate standing. Grading option is Pass/No Credit only.

HESP 287A. Advanced Internship: Sport Management. 1-4 Units. 
This course provides professional leadership experience for graduate students. Agency placement is based on student goals and professional leadership background. Grading option is Pass/No Credit only.

HESP 287B. Advanced Internship: Sport Management. 4 Units. 
This course provides professional leadership experience for graduate students. Agency placement is based on student goals and professional leadership background. Grading option is Pass/No Credit only.

HESP 289A. Advanced Practicum: Sport Management. 4 Units. 
This course is designed to provide students with a practical experience in the application of administrative theory. Prerequisite: HESP 169 or HESP 269 with a "B-" or better. Grading option is Pass/No Credit only.
This practicum offers non-classroom experiences in activities related to Sports Medicine, under conditions determined by the appropriate faculty member. HESP 189 represents advanced practicum work that involves increased independence and responsibility. Enrollment is limited to six units maximum of HESP 089/189A, B, C, D offerings and no category within a course may be repeated for credit. Grading option is Pass/No Credit only.

HESP 291. Independent Study. 1-4 Units.

HESP 293. Special Topics. 3 or 4 Units.

HESP 297. Independent Research. 1-4 Units.

HESP 299. Thesis. 4 Units.

**Psychology Courses**

**PSYC 101. Research Methods and Statistics in Psychology I. 5 Units.**
This course is the first course in a two-course sequence required for the psychology major. This course will teach the student how to design, complete, analyze, interpret, and report empirical research used to test hypotheses derived from psychological theory or its application, and to be able to critically evaluate scientific research produced by others. Prerequisite: Fundamental Math Skills requirement. (GE3B)

**PSYC 102. Research Methods and Statistics in Psychology II. 5 Units.**
This course is the second course in a two-course sequence required for the psychology major. This course will teach you how to design, complete, analyze, interpret, and report empirical research used to test hypotheses derived from psychological theory or its application, and to be able to critically evaluate scientific research produced by others. Prerequisite: PSYC 101 with a "C-" or higher.

**PSYC 115. Advanced Lab in Cognitive Psychology. 4 Units.**
This advanced lab will focus on more in-depth exploration of a specific topic area within the field of Cognitive Psychology. The course will include strong research/applied component that will help students get more hands on feel for research and/or application of the concepts within the field. Possible topics include Memory, Thinking Fast and Slow, or other topics. Prerequisites: PSYC 015, PSYC 11102 with a C- or better.

**PSYC 117. Advanced Lab in Clinical Psychology. 4 Units.**
This advanced lab will focus on a more in-depth exploration of a specific topic area within the field of Clinical Psychology. The course will include a strong research/applied component that will help students get more hands on feel for research and/or application of the concepts within the field. Testing and Assessment, or other topics. Prerequisites: PSYC 017, PSYC 053, PSYC 102 with a C- or better, or permission of instructor.

**PSYC 118. Advanced Lab in Child Clinical Psychology. 4 Units.**
This advanced lab will focus on a more in-depth exploration of a specific topic area within the field of Child Clinical Psychology. The course will include a strong research/applied component that will help students get a more hands on feel for research and/or application of the concepts within the field. Possible topics include Parenting, Child Mental Health, or other topics. Prerequisites: PSYC 017, PSYC 102 with a C- or better.

**PSYC 125. History and Systems of Psychology. 4 Units.**
This course traces the development of "modern psychology" from its birth in early philosophy to its founding as an independent discipline in the late 1800s to its current status with an emphasis on modern behaviorism and cognitive psychology as the two dominant theoretical systems in psychology. In addition, other modern developments such as evolutionary psychology and cognitive neuroscience are discussed. The course focuses on specific content areas and ideas in psychology and the individuals who are most credited with their development.

**PSYC 129. Advanced Lab in Developmental Psychology. 4 Units.**
This advanced lab will focus on a more in-depth exploration of a specific topic area within the field of Developmental Psychology. The course will include a strong research/applied component that will help students get a more hands on feel for research and/or application of the concepts within the field. Possible topics include The Study of Infants, Psychology of Aging, Cognitive Aging, or other topics. Prerequisites: PSYC 029, PSYC 102 with a C- or better. (DVSY, ETHC)

**PSYC 153. Advanced Lab in Behavioral Psychology. 4 Units.**
This advanced lab will focus more in-depth exploration of a specific topic area within the field of Behavioral Psychology. The course will include a strong research/applied component that will help students get a more hands on feel for research and/or application of the concepts within the field. Possible topics may include Behavioral Economics, Behavioral Approaches to Common Childhood Problems, the Power of Habit, or other topics. Prerequisites: PSYC 053, PSYC 102 with a C- or better.

**PSYC 158. Behavioral Assessment. 4 Units.**
An overview of behavioral assessment techniques is examined. Specific topics include data collection, inter-observer agreement, social validity, treatment integrity, functional assessment, stimulus preference assessment, indirect assessment techniques, and functional analysis procedures. Prerequisites: PSYC 053 and permission of instructor.

**PSYC 162. Ethical Behavior. 4 Units.**
This course will cover professional conduct and ethical behavior within the broad discipline of psychology, as well as the specific ethical and professional guidelines for the Behavior Analyst Certification Board (BACB®). This course addresses ethical decision-making, regulatory standards, and professional behavior in assessment, treatment, and research, in a variety of settings. Although this course will encompass a variety of disciplines and settings within psychology, primary attention will be given to those disciplines intersecting with the practice of applied behavior analysis and on those settings in which behavior analysts in practice are most likely to operate. Topics include accountability, confidentiality and informed consent, quality of services, quality of life, emergency management, research and academic settings, professional collaborations, boundaries, cultural competence, and ethical safeguards. Prerequisites: Junior standing or higher and permission of the instructor.

**PSYC 169. Advanced Lab in Social Psychology. 4 Units.**
This advanced lab will focus on a more in-depth exploration of a specific topic area within the field of Social Psychology. The course will include a strong research/applied component that will help students get a more hands on feel for research and/or application of the concepts within the field. Possible topics may include Social Influence, Conformity, or other topics. Prerequisites: PSYCH 069, PSYCH 102 with a C- or better.

**PSYC 183. Research Design. 4 Units.**
This course is the design and analysis of research using single subject and group designs. Prerequisite: PSYC 105 and permission of instructor.

**PSYC 187. Internship. 1-4 Units.**
This internship course gives experiences in a work setting and is contracted on an individual basis. PSYC 187 represents advanced internship work that involves increased independence and responsibility. Students may register for only one course listed below in any semester and may receive no more than four units of credit for any of these courses. Pass/no credit is the only grading.
PSYC 189. Practicum. 4 Units.
The practicum offers non-classroom experiences in activities related to the curriculum under conditions that is determined by the appropriate faculty member. PSYC 189 represents advanced practicum work which involves increased independence and responsibility. Students may register for only one course listed below in any semester and may receive no more than four units of credit for any of these courses. Pass/no credit is the only grading.

PSYC 189A. Applied Psychology Practicum. 4 Units.
Students will acquire skills necessary to the application of principles of general psychology to solve personal, organizational and social problems while serving as assistants to faculty and professional psychologists.

PSYC 191. Independent Study. 1-4 Units.

PSYC 195. Seminar. 4 Units.

PSYC 197. Independent Research. 1-4 Units.

PSYC 207. Psychology of Learning. 4 Units.
This course focuses on the scientific investigation of learning and behavior. Both experimental and related theoretical developments are considered, as well as applications of the basic principles of learning to issues of social significance.

PSYC 251. Behavioral Treatment/Applications. 4 Units.
This course focuses on the application of behavior analytic principles and methods in applied settings, with an emphasis on behavior change procedures, maintenance and generalization of behavior change, and emergency interventions. Topics addressed include the definition and characteristics of applied behavior analysis, selection and evaluation of intervention strategies, measurement of behavior, display and interpretation of behavioral data, and behavioral assessment. Additionally, basic behavioral principles, single-case experimental design, and ethical issues are discussed in the context of behavioral assessment and intervention. Open This course is open only to graduate students with permission.

PSYC 258. Behavioral Assessment. 4 Units.
Students study an overview of behavioral assessment techniques is examined. Specific topics covered include data collection, inter-observer agreement, social validity, treatment integrity, functional assessment, stimulus preference assessment, indirect assessment techniques, and functional analysis procedures.

PSYC 262. Ethical Behavior. 4 Units.
This course will cover professional conduct and ethical behavior with the broad discipline of psychology, as well as the specific ethical and professional guidelines for the Behavior Analysis Certificate (BACB®). This course addresses ethical decision-making, regulatory standards, and professional behavior in assessment, treatment, and research, in a variety of settings. Although this course will encompass a variety of disciplines and settings within psychology, primary attention will be given to those disciplines intersecting with the practice of applied behavior analysis and on those settings in which behavior analysts in practice are most likely to operate. Topics include accountability, confidentiality and informed consent, quality of services, quality of life, emergency management, research and academic settings, professional collaborations, boundaries, cultural competence, and ethical safeguards. Prerequisites: Psychology major and graduate student status.

PSYC 278. Controversial Treatments in Applied Settings. 4 Units.
This graduate seminar covers the varieties and consequences of pseudoscience in the helping professions and how to avoid being influenced by them. The helping professions comprise a significant industry in the United States. This includes medicine, psychology (including behavior analysis), psychiatry, social work, and other forms of counseling. It includes community mental health centers, and other venues such as mental hospitals, crisis centers, and schools. Each profession has a code of ethics that calls on professionals to help clients, to avoid harm, to honor informed consent requirements and promote independence. Professional codes of ethics call on professionals to draw on practice-related research findings. What do we find if we look closely at their everyday behavior? To what extent do professionals and researchers honor obligations described in such codes of ethics? Although this course will encompass a variety of disciplines and settings, primary attention will be given to those disciplines intersecting the practice of applied behavior analysis and on those settings in which behavior analysts in practice are most likely to operate. Prerequisites: Psychology major and graduate student status.

PSYC 283. Research Design. 4 Units.
Students learn the design and analysis of research using single subject and group designs.

PSYC 285E. Behavior Analysis Internship I. 1 Unit.
This course provides clinical experience with the University of the Pacific Behavior Analysis Services Program. This course includes practice in conducting behavioral interventions, designing, implementing, and monitoring behavior analysis programs for clients. Students oversee the implementation of behavioral programs by others, attending behavioral program planning meetings, and reviewing program-relevant literature. Faculty and staff will observe interns engaging activities in the natural environment at least once every two weeks, and provide specific feedback to interns on their performance. Multiple populations and sites will be available, including but not limited to, typically developing school-aged children in school and home settings, and individuals with psychiatric diagnoses and/or developmental disabilities in their homes or in community settings. Permission of instructor. Pass/No Credit grading only.

PSYC 285F. Behavior Analysis Internship II. 1 Unit.
This course provides clinical experience with the University of the Pacific Behavior Analysis Services Program. This course includes practice in conducting behavior analysis programs for clients, overseeing the implementation of behavioral programs by others, attending behavioral program planning meetings, and reviewing program-relevant literature. Faculty and staff observe interns engaging in activities in the natural environment at least once every two weeks, and they provide specific feedback to interns on their performance. Multiple populations and sites are available, including but not limited to, typically developing school-aged children in school and home settings, and individuals with psychiatric diagnoses and/or developmental disabilities in their homes or in community settings. Permission of instructor. Pass/No Credit grading only.

PSYC 287. Graduate Internship. 1-4 Units.

PSYC 289. Practicum. 1-4 Units.

PSYC 291. Graduate Independent Study. 1-4 Units.

PSYC 295. Graduate Seminar in Psychology. 4 Units.

PSYC 297. Graduate Independent Research. 1-4 Units.
Pass/No Credit grading only.
PSYC 297D. Independent Research. 1-4 Units.
PSYC 297E. Independent Research. 1-4 Units.
PSYC 299. Thesis. 2 or 4 Units.