

MATH & SCIENCE DIVISION

Contact Information

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Introduction to the Math and Science Division

Students in the Math and Science Division engage in hands-on learning, research, quantitative reasoning, and scientific inquiry. Programs explore the natural world, human health and movement, sport, mathematics, computing, and technology, with an emphasis on critical thinking, problem-solving, and real-world application.

The division prepares students for careers and graduate study in the natural sciences, mathematics, computer science, software engineering, cybersecurity, web design and development, kinesiology, sport management, health professions, education, and other science- and technology-based fields. The division also supports students across campus through General Education courses, health curriculum offerings, pre-allied health coursework, and foundational mathematics and science courses.

Students can expect individualized attention, academic rigor, faculty mentorship, and opportunities to apply what they learn in laboratories, computing environments, the field, human performance settings, internships, and community-based experiences. Faculty advisors work closely with students to plan coursework, mentor research and capstone projects, and support academic and professional development. Additional support is available through the college's free Student Success Center.

Students are encouraged to participate in undergraduate research and other applied projects before graduation. The division features facilities designed for undergraduate teaching and research, including an instrumental analysis laboratory, a human movement and performance analysis laboratory, and extensive plant, animal, and geological teaching collections. Student research is conducted in partnership with faculty and is often supported through grants and programs such as Idaho INBRE and HERC.

Majors Offered, BA/BS unless otherwise noted

- Biology (with secondary education option)
- Chemistry (with secondary education option)
- Chemistry: Geochemistry
- Computational Biology
- Computer Science
- Computer Science: Software Engineering
- Cybersecurity Management
- Earth Science (with secondary education option)
- Exercise Science
- General Studies: Natural Science and Mathematics
- Kinesiology, available online and/or in person
- Kinesiology with Teacher Certification in K-12 Physical Education and 6-12 Health (co-curricular degree with Teacher Education)
- Liberal Arts: Natural Science and Mathematics AA
- Mathematics (with secondary education option)
- Natural Science Secondary Education
- Sport Management (co-curricular degree with Business), available online and/or in person
- Web Design and Development AAS

Program Outcomes

Biology

- Understand cell structure, function, and reproduction.
- Understand the principles of natural selection and evolution.
- Understand organismal form and function.

- Think critically and apply knowledge in novel contexts.
- Perform basic laboratory procedures in a safe manner.

Chemistry

- Understand the relationship between matter and energy, composition and structure, and their relation to physical and chemical behavior.
- Apply chemical principles to biological, geological and environmental phenomena.
- Demonstrate quantitative and conceptual reasoning.
- Think critically and apply knowledge in novel contexts.
- Design, conduct and report scientific research within the discipline.
- Safely and effectively apply laboratory skills.
- Apply collaborative, ethical and civically engaged practices.

Computer Science

- Think critically and apply knowledge in novel contexts.
- Design and implement object-oriented and imperative programs.
- Understand and apply algorithms and data structures.
- Understand relational databases, operating system kernels, and network software development.
- Apply scientific methods and perform basic laboratory analysis.

Computer Science: Software Engineering

- Design and implement object-oriented and imperative programs.
- Understand and apply algorithms and data structures.
- Understand and describe the use of relational databases.
- Demonstrate knowledge of the scientific method and perform laboratory analysis.
- Construct and design a web page, site, or application.
- Research and describe solutions to customer requirements through a capstone project.
- Implement cybersecurity risk-management concepts.
- Prepare professional oral and written communication.
- Evaluate and apply software-development knowledge in support of decision-making.

Cybersecurity Management

- Design and implement object-oriented and imperative programs.
- Understand algorithms and data structures.
- Understand relational databases and network development.
- Explain online safety in the context of the wider world.
- Explain malware, including viruses and trojans, as well as network security and cryptography.
- Evaluate identity-theft risks and apply risk-management principles.
- Explain concepts, theories, and practices in the functional areas of business.
- Prepare professional oral and written communication.
- Evaluate and apply information technology in support of management decision-making.

Earth Science

- Understand the major features and processes in Earth's systems and the interrelationships between them.
- Understand the interactions between Earth systems and human society.
- Apply geoscience knowledge and critical thinking skills to identify and address a variety of earth science problems.
- Understand field research techniques and be able to critically interpret geologic phenomena in the field.
- Apply scientific methods with clearly articulated hypotheses and understand the fundamentals of collecting and applying data to test hypotheses.

Kinesiology and Sport Management

- Synthesize foundational knowledge related to human movement, sport, health, and performance across relevant domains.
- Analyze scientific or industry research relevant to sport, fitness, and health contexts.
- Develop career-specific skills required by contemporary performance, wellness, or sport organizations.
- Apply professionalism, leadership, ethical decision-making, and effective communication in sport, health, or organizational environments.
- For Kinesiology: Apply scientific principles of exercise, movement, and health to improve physical performance, fitness, and wellness.

- For Sport Management: Apply business, organizational, and cultural principles to the management and operation of sport organizations and sport-related enterprises.

Mathematics

- Create, formulate, understand, and communicate mathematical conjectures, arguments, and proofs.
- Apply precise and logical reasoning to construct multi-step strategies for solving mathematical problems and effectively communicate those solutions.
- Clearly communicate mathematical ideas verbally and in writing.
- Use numerical and symbolic mathematical software to support problem-solving and investigation and understand the limitations of such software.

Web Design and Development

- Describe and define the roles of a web designer and web developer.
- Publish and update websites and set up a domain.
- Construct and design a web page, site, or application using standards-driven HTML and CSS.
- Implement event-driven programming on a web page using JavaScript.
- Distinguish among content management systems and demonstrate their use and utility.
- Complete a web design and development portfolio.
- Demonstrate understanding of web-based graphic design, image editing, and design layout.
- Compare JavaScript frameworks and demonstrate their use in building a client-oriented web application.
- Research and describe solutions to customer requirements through a web development capstone project.

Completion of a Technical Skills Assessment is required.

See the Teacher Education and Mathematics program page f (<http://catalog.lcsc.edu/professional-studies/teacher-education-mathematics-division/>) or *secondary education outcomes*.

Minors

Biology, Chemistry, Coaching, Computer Science, Forensic Science, Geology, GIS, Health, Kinesiology, Mathematics, Middle School Math, Middle School Science, Natural Science, Physical Science

Undergraduate Certificates (academic unless otherwise noted)

- Fitness
- Sports Marketing
- Sports Nutrition

Graduate Certificate

- Sport Coaching Graduate Certificate

3+2 BS/MS in Athletic Training

LC State offers 3+2 partnership pathways with the University of Idaho and Idaho State University for students pursuing a Master of Science in Athletic Training (MSAT).

In both programs, students complete the first three years at LC State, majoring in Kinesiology: Exercise Science and Health Occupations (for UI) or Exercise Science (for ISU). During the third year, students apply through a competitive admissions process to the MSAT program at the respective university.

Students accepted into the program complete two additional years at UI or ISU. Credits from the first year of graduate study transfer back to LC State to fulfill bachelor's degree requirements. Upon completion of the program, students also earn a Master of Science in Athletic Training from the partner institution.

Additional Admission Requirements

Teacher Education Programs

See the Teacher Education and Mathematics program page (<http://catalog.lcsc.edu/professional-studies/teacher-education-mathematics-division/>) for admissions requirements.

3+2 BS/MS in Athletic Training

During the third year of the 3+2 program, students apply through a competitive admissions process to the MSAT program at either University of Idaho or Idaho State University.

Sport Coaching Graduate Certificate

For more information on this program and the admissions requirements, visit our Sport Coaching webpage. (<http://catalog.lcsc.edu/professional-studies/graduate-studies/sport-coaching-gcert/>)

Assessment

Assessment of non-teaching majors may include:

1. Senior Exit Interview (content): Students may be required to pass a comprehensive oral content knowledge interview with our faculty.
2. Senior Exit Interview (survey): Students may have an interview to discuss their college experiences.
3. Senior Research Project: Students may be required complete an independent research project that involves a review of the related literature, collection and analysis of data, and a final oral presentation.
4. Senior Exit Survey: Students may be asked to complete a survey about their experiences at the College.
5. Senior Exit Exam: Select majors require a national examination prior to graduation.

Assessment of teaching majors

See the Teacher Education and Mathematics program page (<http://catalog.lcsc.edu/professional-studies/teacher-education-mathematics-division/>) for assessment information.

Advising

Students are assigned a faculty advisor based on their specific major or emphasis area. Students in interdisciplinary majors (Sport Management and Teaching) have two advisors: one from the Physical, Life, Movement, and Sport Science Division and one from the division that shares the major. Students are required to meet with their faculty advisor(s) each semester in advance of registration and encouraged to meet with them any time that they have questions concerning their program or are in need of academic advice.

Tutoring

The Division of Physical, Life, Movement, and Sport Sciences has tutoring support available for many introductory courses. The Student Success Center is open Monday through Friday with both daytime and evening hours. <https://www.lcsc.edu/student-success-center> (<https://www.lcsc.edu/student-success-center/>)

Clubs

- Astronomy Club
- Geology Club
- LC Chapter of the Wildlife Society
- Sport Management Club

BIOL-100 CONCEPTS OF BIOLOGY 4 Credits

This online course will serve as an introductory course for non-science majors. This course will cover the main biological principles and how these relate to daily life. Topics include cell biology, reproduction and genetics, evolution and ecology. Pre-requisite: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

BIOL-120 PLANTS AND PEOPLE 4 Credits

Fundamentals of plant growth and development are addressed through the study of useful plants. Current and historical uses of plants by cultures around the world with an emphasis on plant form and function, plant diversity and origin of crops. Pre-requisites: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

BIOL-123 BIOLOGY IN FILM 3 Credits

This introductory science course for non-majors will explore the scientific method and biological concepts as they are depicted in popular films. Topics will include genetic diseases, biotechnology, infectious diseases, and bioethics. Requisites: Completion of, or current enrollment in, ENGL-102 or ENGL-109.

BIOL-175 HUMAN BIOLOGY 4 Credits

Form and function of life using the human organism as the specific example. Topics will include: life, evolution, the human organism in the environment, human ecology, human systems including organization, support and movement, processing and transport, integration and coordination, and reproduction and development. Three hours of lecture and one 3-hour laboratory per week. Pre-requisite: MATH-015, MTHPT-010 or MTHPT-012 with a grade of 'C' or better.

BIOL-181 ORGANISMAL BIOLOGY 4 Credits

An introductory course for science majors examining organismal biology in an evolutionary context, including biodiversity and ecology, structure and function, reproduction, physiology, and morphology of viruses, bacteria, protists, fungi, plants, and animals. Three hours of lecture and one 3-hour laboratory period per week. Lab fee. Pre-requisite: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

BIOL-182 CELLULAR BIOLOGY 4 Credits

An introductory course for science majors with emphases on chemical, physical, and biological characteristics of the living organism and its metabolism. Students will acquire a general understanding of the chemistry of life, basic cell structure and function, metabolism, and genetics. Three hours of lecture and one 3-hour laboratory per week. Pre-requisites: CHEM-111 or CHEM-105 with a grade of C or better.

BIOL-190 DIRECTED STUDY IN BIOLOGY 1-12 Credits**BIOL-192 SPECIAL TOPICS IN BIOLOGY 1-12 Credits****BIOL-195 PRACTICUM IN BIOLOGY 1-12 Credits****BIOL-226 ANATOMY AND PHYSIOLOGY I SURVEY 2 Credits**

This course is a survey of material that is presented in Biology 227, Anatomy and Physiology I. By the end of the 8-week course students will have a better understanding of the systems presented in Biology 227. Throughout the course students will also gain a better understanding of critical thinking and applying their knowledge to questions about the material. Prerequisite: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

BIOL-227 HUMAN ANATOMY AND PHYSIOLOGY I 4 Credits

The first semester of a two semester sequence in Human Anatomy and Physiology. The course focuses on principles of cytology, biochemistry and histology and the following body systems: integumentary, skeletal, muscular, and nervous. Three hours of lecture and one three-hour laboratory per week. Pre-requisite: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

BIOL-228 HUMAN ANATOMY AND PHYSIOLOGY II 4 Credits

The second semester of a two semester sequence in Human Anatomy & Physiology. The course focuses on principles of cytology, biochemistry and histology and the following body systems: endocrine, cardiovascular, immunity, respiratory, digestion, urinary, and reproductive. Three hours of lecture and one three-hour laboratory per week. Pre-requisite: BIOL-227 with a grade of 'C' or better. Co-requisites: CHEM-105 or CHEM-111.

BIOL-250 MICROBIOLOGY FOR HEALTH SCIENCES 4 Credits

A study of microorganisms causing infectious diseases and contamination of foods. Focus will be on general structure and function of microorganisms, growth, and control through sterilization and antimicrobials. Lab will emphasize growth, identification and aseptic technique. Course does not satisfy requirement for Biology major. Four hours of lecture and one 3-hour laboratory period per week. Pre-requisites: CHEM-105 and Math Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

BIOL-280 PRE-MEDICAL SEMINAR 1 Credit

A seminar-based course designed to introduce students to the various graduate medical programs, including: physician (MD and DO), dentistry, veterinary, podiatry, optometry, pharmacy, physical and occupational therapy, and physician assistant. Students will discuss current healthcare issues, explore health programs and institutions, and be provided formal assistance as they prepare for programs in medicine. Students will develop strategies for admission, writing personal statements, participating in mock interviews, determining plans for letters of recommendation, and discussing individual credentials for these programs. One hour lecture per week with additional time to be determined by individual needs. Pre-requisites: A grade of 'C' or better in ENGL-101 or satisfactory placement and Math Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores. Graded P/F only.

BIOL-290 DIRECTED STUDY IN BIOLOGY 1-4 Credits**BIOL-291 WORKSHOP IN BIOLOGY 1-4 Credits****BIOL-292 SPECIAL TOPICS IN BIOLOGY 1-4 Credits****BIOL-295 PRACTICUM IN BIOLOGY 1-2 Credits****BIOL-299 RESEARCH ASSISTANTSHIP 1-12 Credits****BIOL-312 BIOLOGY OF HUMAN DISEASE 3 Credits**

This course explores the underlying biological and physiological mechanisms of human disease. Topics include disruptions in normal cellular and organ system function that lead to pathological conditions, with emphasis on integrating molecular, cellular, and physiological processes in disease development and progression. Three hours of lecture per week. Pre-requisite: BIOL-228 with a grade of 'C' or better.

BIOL-314 PATHOPHYSIOLOGY RECITATION 1 Credit

Designed to grow student learning and increase proficiency at critical thinking and problem solving. Concurrent enrollment in BIOL-312 is required. Graded P/F only.

BIOL-331 ECOLOGY 3 Credits

This class will cover ecological principles as they relate to both plant and animal systems. Topics include the physiological adaptations of organisms to their environment, population ecology and the evolution of different life history strategies, and ecological principles related to species interactions and community dynamics. Three hours of lecture per week. Pre-requisites: BIOL-181 and BIOL-182 with a grade of C or better.

BIOL-341 GENETICS 4 Credits

An introduction to genetic mechanisms in animals, plants and microorganisms. Areas covered include transmission genetics and molecular genetics. Three hours of lecture and one 3-hour lab per week. This course is writing integrated. Pre-requisites: BIOL-182 and CHEM-112 with a grade of C or better.

BIOL-355 GENERAL MICROBIOLOGY 4 Credits

The structure, physiology, genetics, and metabolism of microorganisms with emphasis on their diversity and ecology. Microorganisms and their relationship to industry, environment, and disease. Lab will emphasize growth, identification, and laboratory design. Three hours of lecture and one 3-hour laboratory per week. Pre-requisite: BIOL-182 with a grade of 'C' or better.

BIOL-362 CELLULAR AND MOLECULAR BIOLOGY 4 Credits

A comprehensive study of cell structure and function with emphasis on cell organelles and the cellular membrane. Included in this course is a detailed examination of cellular metabolism, the cell cycle, regulation of cell growth and division, cell signaling, and gene expression. Recitation includes a thorough survey of cellular and molecular techniques along with a weekly literature review exploring the use of these techniques. Three hours of lecture and one 3-hour recitation per week. Prerequisite: BIOL-182 with a grade of 'C' or better.

BIOL-372 COMPUTATIONAL BIOSTATISTICS 4 Credits

An integrative biology course that incorporates aspects of biology, statistics, and bioinformatics. The course is designed to familiarize students with experimental design and applied biological statistics using the R statistical environment and other freely available analysis packages. Students will apply parametric and non-parametric analytical methods to various forms of biological data, including phenotypic and sequence data. Three hours of lecture and one three-hour laboratory per week. Pre-requisite: BIOL-182 with a grade of 'C' or better.

BIOL-390 DIRECTED STUDY IN BIOLOGY 1-4 Credits**BIOL-392 SPECIAL TOPICS IN BIOLOGY 1-4 Credits****BIOL-394 INTERNSHIP IN BIOLOGY 1-12 Credits****BIOL-395 PRACTICUM IN BIOLOGY 1-12 Credits****BIOL-399 RESEARCH ASSISTANTSHIP 1-12 Credits****BIOL-401 MAMMALOLOGY 4 Credits**

The study of mammals, their evolution, natural history, identification of regional mammals, and field techniques for scientific study. The course includes anatomy, phylogenetics, systematics, ecology, practical field and laboratory techniques. Three hours of lecture and one 3-hour laboratory period per week. There will be at least one weekend field trip. Pre-requisite: BIOL-181 and BIOL-182, with a grade of C or better.

BIOL-402 ORNITHOLOGY 4 Credits

The study of birds, their evolution, natural history, identification of regional birds by sight and sound, and field techniques for scientific study. The course includes anatomy, phylogenetics, systematics, ecology, practical field and laboratory techniques. Three hours of lecture and one 3-hour laboratory period per week. There will be at least one weekend field trip. Pre-requisite: BIOL-181 and BIOL-182 with a grade of C or better.

BIOL-404 ENTOMOLOGY 4 Credits

The study of insects, their evolution, natural history, identification of dominant insects and field techniques for scientific study. Includes anatomy, physiology, phylogenetics, systematics, ecology, practical field and laboratory techniques. Three hours of lecture and one 3-hour laboratory period per week. Pre-requisite: BIOL-181 and BIOL-182 with a grade of C or better.

BIOL-420 HUMAN DISSECTION 2 Credits

Students dissect and identify gross anatomy of human cadavers under the supervision of the instructor. Pre-requisite: a grade of 'C' or better in BIOL-228.

BIOL-430 HUMAN ANATOMY AND DISSECTION 3 Credits

Exploration of advanced concepts of human anatomy through instruction, dissection, and demonstration. Learning outcomes will include dissection techniques, human organ system anatomy, and effective teaching skills. Course includes one hour of lecture/demonstration per week as well as 5 to 6 hours of individualized lab time throughout the week. Pre-requisite: 'C' or better in BIOL-228.

BIOL-443 IMMUNOLOGY 3 Credits

Survey of Immunology and Immunological principles. Concepts include development of the immune system, innate versus acquired immunity, immunoglobulin structure and genetics, antigen-antibody reactions, the major histocompatibility complex and antigen presentation, T cell receptors (genetics, structure, selection), T- and B-cell activation and effector functions, cytokines, adhesion molecules, phagocytic cell function, immune responses to infectious organisms and tumors, autoimmune diseases, and immunodeficiency. Three hours of lecture per week. Pre-requisite: BIOL-228, BIOL-250, BIOL-355, or BIOL-362 with a grade of C or better.

BIOL-450 FIELD BOTANY 4 Credits

This class will use the fields of plant systematics and ecology to examine our regional flora. Within the field of plant systematics, we will survey the plant kingdom, from non-vascular plants to angiosperms, with an emphasis on evolutionary relationships and identification of regional plants. Ecological issues related to our regional plant communities will be examined through readings and discussions of the primary literature. There will be one or two required all day field trips. Pre-requisite: BIOL-181 and BIOL-182 with a grade of C or better.

BIOL-455 MEDICAL MICROBIOLOGY 3 Credits

Course applies basic principles of Microbiology to aspects of infectious disease. Topics include etiology, epidemiology, pathogenesis, and symptomology of bacterial, fungal, and viral diseases of humans as well as treatment and prevention. A survey of bacterial, viral, and fungal pathogens serves as the foundation for the course. Pre-requisite: BIOL-355 with a grade of C or better.

BIOL-460 EVOLUTION 4 Credits

Every area of biological investigation, from the study of biodiversity and consequences of environmental change to the origin and diversification of protein coding genes and variation in developmental processes, is informed by the principles of evolutionary biology. The field of evolutionary biology is one of the most dynamic areas in biology with application to understanding disease dynamics, human biology, agriculture, and the conservation of biological diversity. The study of evolution encompasses both the description and analysis of historical patterns in the biological diversity of life as well as the conceptual and mathematical frameworks that describes the processes causing evolutionary change through time. In this course, we develop the basic mathematical frameworks for population and quantitative genetics and examine evolution at the molecular and phenotypic levels. Throughout the course we draw extensively from the primary literature to illustrate the amazing diversity of life around us and the evolutionary processes that have shaped this diversity over hundreds of millions of years. There will be approximately 3 hours of lecture and 1 hour of literature review per week. Prerequisite: BIOL-341 or instructor's consent.

BIOL-480 PRE-MEDICAL SEMINAR 2 Credits

A seminar-based course designed to continue the work done in BIOL 280. This course will emphasize a preparation for applications to medical programs and resulting interviews. Students will continue to explore current events in health care and/or medical science. Discussion of individual credentials for medical programs, planning for letters of recommendation, and self-directed professional job shadowing will be included. One hour lecture per week with additional time to be determined by individual needs. Course does not meet senior elective requirement. Pre-requisite: Successful completion of BIOL-280. Graded P/F only.

BIOL-485 TEACHING ASSISTANT IN BIOLOGY 1-2 Credits

Students will learn to organize and prepare laboratory sessions to be taught in biology courses. Students may also gain experience teaching laboratory concepts to biology students.

BIOL-490 DIRECTED STUDY IN BIOLOGY 1-4 Credits**BIOL-491 WORKSHOP IN BIOLOGY 1-4 Credits****BIOL-492 SPECIAL TOPICS IN BIOLOGY 1-4 Credits****BIOL-494 INTERNSHIP IN BIOLOGY 1-12 Credits****BIOL-495 PRACTICUM IN BIOLOGY 1-2 Credits****BIOL-499 SENIOR PROJECT AND SEMINAR IN BIOLOGY 1-3 Credits**

Students will conduct and communicate the results of a research project in the Natural Sciences Division. Topics may include the historical, philosophical, cultural and environmental aspects, and the processes of natural science. Requirements of students include satisfactory oral presentation and defense of their research and submission of a written report approved by their advisor to the Natural Sciences Division. Pre-requisite: NS-398.

CHEM-100 CONCEPTS OF CHEMISTRY 4 Credits

From the food we eat to the medicines we take to the transportation we use, we experience chemistry every day. In this course, you will study the chemistry of everyday life with the goal of making informed consumer decisions. Pre-requisite: Level C or higher: Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

CHEM-105 GENERAL, ORGANIC AND BIOCHEMISTRY 4 Credits

An introduction to chemistry with an emphasis on biochemistry for the health professions. Three lectures and one laboratory per week. Pre-requisite: Level C or higher: Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

CHEM-111 PRINCIPLES OF CHEMISTRY I 4 Credits

A systematic and intensive treatment of chemical principles and their applications. Four hours of lecture/recitation, and one 3-hour laboratory per week. Lab fee. Pre-requisite: Level C or higher: Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

CHEM-112 PRINCIPLES OF CHEMISTRY II 4 Credits

Elementary theoretical chemistry and its application to analytical practice. Includes emphasis on intermolecular forces, equilibrium, electrochemistry and nuclear chemistry. Four hours of lecture/recitation and one 3-hour laboratory per week. Pre-requisite: CHEM-111 with a grade of C or better. Lab fee.

CHEM-190 DIRECTED STUDY IN CHEMISTRY 1-12 Credits**CHEM-192 SPECIAL TOPICS IN CHEMISTRY 1-12 Credits****CHEM-195 PRACTICUM IN CHEMISTRY 1-2 Credits****CHEM-199 RESEARCH ASSISTANTSHIP IN CHEMISTRY 1-12 Credits****CHEM-290 DIRECTED STUDY IN CHEMISTRY 1-4 Credits****CHEM-291 WORKSHOP IN CHEMISTRY 1-4 Credits****CHEM-292 SPECIAL TOPICS IN CHEMISTRY 1-4 Credits****CHEM-294 INTERNSHIP IN CHEMISTRY 12 Credits****CHEM-295 PRACTICUM IN CHEMISTRY 1-2 Credits****CHEM-299 RESEARCH ASSISTANTSHIP 1-12 Credits****CHEM-300 PHYSICAL CHEMISTRY I WITH LABORATORY 4 Credits**

Investigates Properties of Matter and Gases, Laws of Thermodynamics, Energy Changes, Chemical and Phase Equilibrium, Solutions, and Chemical Kinetics. Laboratory component demonstrates and tests these concepts (3 hour lab). Pre-requisite: MATH-175 and CHEM-112 with a grade of C or better.

CHEM-306 PHYSICAL CHEMISTRY II 3 Credits

Topics include Quantum theory, Atoms, Diatomic Molecules, Polyatomic Molecules and Spectroscopy. Pre-requisite: CHEM-300 with a grade of C or better.

CHEM-325 QUANTITATIVE ANALYSIS 3 Credits

Theory of classical gravimetric and volumetric chemical analyses with an introduction to instrumental techniques. Basic data handling and statistics, chemical equilibrium, electrochemistry. Three hours of lecture per week. Pre-requisite of CHEM-112 with a grade of C or better. Co-requisite of CHEM-325L.

CHEM-325L QUANTITATIVE ANALYSIS LABORATORY 2 Credits

Laboratory course companion to CHEM 325 that develops quantitative laboratory skills including accurate/precise weighing and pipetting, acid digestion, dilution, filtration and titration. The operation and basic theory of instruments including molecular and atomic absorption, high performance liquid chromatography, ion chromatography, and gas chromatography-mass spectrometry will be explored. Statistical reasoning will be emphasized. 4 hours per week of lab. PREREQ: CHEM 112; COREQ: CHEM 325; LAB FEE.

CHEM-353 LABORATORY PREPARATION TECHNIQUES 2 Credits

Techniques of solution preparation, chemical storage and management, prevention of contamination, and quality assurance. One hour of lecture and one 3-hour laboratory per week. Pre-requisite: CHEM-325 with a grade of C or better.

CHEM-371 ORGANIC CHEMISTRY I 3 Credits

Principles and theories of organic chemistry and the properties, preparations, and reactions of organic compounds. Three hours of lecture per week. This is a writing integrated course. Pre-requisite: CHEM-112 with a grade of C or better.

CHEM-372 ORGANIC CHEMISTRY II 3 Credits

Continuation of Chemistry 371. Three hours of lecture per week. Pre-requisite: CHEM-371 with a grade of C or better.

CHEM-373 ORGANIC CHEMISTRY I LAB 1 Credit

Laboratory to accompany Chemistry 371. One 3-hour lab per week. Co-requisite: CHEM-371.

CHEM-376 ORGANIC CHEMISTRY II LAB 2 Credits

Laboratory to accompany CHEM-372. 3-hours of lab per week and information literacy. Pre-requisite: CHEM-371 and CHEM-373, with a grade of C or better. Co-requisite: CHEM-372. Lab fee.

CHEM-390 DIRECTED STUDY IN CHEMISTRY 1-4 Credits**CHEM-392 SPECIAL TOPICS IN CHEMISTRY 1-4 Credits****CHEM-394 INTERNSHIP IN CHEMISTRY 1-12 Credits****CHEM-395 PRACTICUM IN CHEMISTRY 1-2 Credits****CHEM-399 RESEARCH ASSISTANTSHIP 1-12 Credits****CHEM-420 PRINCIPLES OF GEOCHEMISTRY 3 Credits**

This 400-level course is designed to draw together the themes and topics from other courses in the Earth Science major into an integrated picture of Earth and its interrelated systems, as well as applying chemistry to these systems. The focal discussion will be on the interactions between the atmosphere, hydrosphere, biosphere and lithosphere and current topics of interest related to them. Of particular interest are scientific problems involving Earth's systems such as coral bleaching, climate change, and water pollution. Pre-requisite: CHEM-112 with a grade of C or better. Crosslisted with GEOL-420.

CHEM-454 INSTRUMENTAL ANALYSIS 5 Credits

Course covers the basic principles and use of instruments. Ultraviolet, visible, infrared, Raman, and atomic absorption spectroscopy. Electrochemistry. Pre-requisite: CHEM-325 with a grade of C or better.

CHEM-463 INORGANIC CHEMISTRY 4 Credits

Course covers the basic principles of descriptive chemistry, coordination chemistry, models of bonding in transition metal complexes, molecular symmetry, molecular orbital theory, spectroscopy, and organometallic chemistry. The laboratory component introduces the student to standard aspects of synthetic inorganic chemistry, bioinorganic chemistry, organometallic chemistry and catalytic chemistry. Pre-requisite: CHEM-371 with a grade of C or better.

CHEM-481 BIOCHEMISTRY I 4 Credits

A study of protein structures and functions and the basics of sugar and lipid protein analysis. Three hours of lecture and one 3-hour laboratory per week. Pre-requisite: Both BIOL-182 and CHEM-371 with a grade of C or better.

CHEM-482 BIOCHEMISTRY II 3 Credits

Functional continuation of CHEM-481. Lipid, amino acid and nucleotide metabolism. Emphasis is on regulation of metabolism, metabolic dysfunctions, biochemical mechanisms of hormone action, biochemical genetics, protein synthesis, and metabolic consequences of genetic defects. Three hours of lecture/discussion per week. Pre-requisite: CHEM-481 with a grade of C or better.

CHEM-490 DIRECTED STUDY IN CHEMISTRY 1-4 Credits**CHEM-491 WORKSHOP IN CHEMISTRY 1-4 Credits****CHEM-492 SPECIAL TOPICS IN CHEMISTRY 1-4 Credits****CHEM-494 INTERNSHIP IN CHEMISTRY 1-12 Credits****CHEM-495 PRACTICUM IN CHEMISTRY 1-2 Credits****CHEM-499 RESEARCH PROJECT AND SEMINAR IN CHEMISTRY 1-3 Credits**

Students will conduct and communicate the results of a research project in the Natural Sciences Division. Topics may include the historical, philosophical, cultural and environmental aspects, and the processes of natural science. Requirements of students include satisfactory oral presentation and defense of their research and submission of a written report approved by their advisor to the Natural Sciences Division. Pre-requisite: NS-398.

ENGR-105 ENGINEERING GRAPHICS 2 Credits

Engineering Graphics emphasizes computer aided graphical analysis and transmission of information. Study of computer designing and drafting systems is presented using various CAD software applications with specialization in the AUTOCAD program. Included will be freehand and computer generated engineering graphics, 2D, and 3D graphics in orthographic and pictorial projections in sections and various views, graphical analysis of data, and measurements dimensioning. Course Fee.

ENGR-108 SEMICONDUCTORS, SCIENCE, AND SOCIETY 4 Credits

This course covers the foundations of semiconductor science and technology. Students will learn where semiconductors are used in Idaho and beyond, how to build basic circuits, and what careers are possible in the semiconductor industry. They will explore industry innovations and manufacturing, trace paths to reach career goals in the semiconductor industry, and investigate the future of semiconductor science through team challenges and gamified learning explorations.

ENGR-110 SOLIDWORKS - COMPUTER AIDED DRAFTING 3 Credits

An introduction to the concepts commands of parametric solid modeling. Students create sketches and add relationships to the sketch segments, extrude the sketches to create models, add features such as fillets, cut, extrude, chamfers, holes, draft, shell, lofts and sweeps, assemblies and BOM, the use of equations, part configurations and design tables, derived and molded parts.

ENGR-115 SURVEYING 3 Credits

Theory of measurements, basic equations for survey computations, types of distribution of errors, topographical and land surveying introduction to geographic information systems and global positioning systems, coordinate geometry and coordinate transformations, site engineering projects using land development software, application of surveying methods to construction; site engineering, and civil engineering projects surveying instruments. Pre-requisite: MATH-144.

ENGR-120 ENGINEERING FUND ANALYSIS & DESIGN 4 Credits

This course provides both an introduction to the engineering profession through design projects, research, and guest speakers along with development of college success skills for an engineering academic program including time management and study skills, critical thinking, problem solving skills, communication skills, ethics, and an introduction to basic computer programs.

ENGR-210 ENGINEERING STATICS 3 Credits

Engineering application of the principles of mechanics, force systems, equilibrium, structures, distributed forces, moments of inertia, and friction with an emphasis on problem solving. Pre-requisite: Grade of 'C' or better in MATH-170.

ENGR-220 ENGINEERING DYNAMICS 3 Credits

Engineering application of principles of particle and rigid body kinematics, force-mass-acceleration relations, work and energy, impulse and momentum, and moments of inertia and mass with an emphasis on problem solving. Course fee. Pre-requisite: A grade of 'C' or better in MATH-170 and ENGR-210.

ENGR-240 ELECTRICAL CIRCUITS 4 Credits

An introduction to basic electric circuit analysis with lab. Concepts covered include steady-state DC circuits, AC steady-state circuits using phasor analysis, AC power calculation, first order transient, ideal op-amps, ideal transformers, and introduction to balanced 3-phase circuits. Pre-requisite: PHYS-211 or MATH-170.

ENGR-292 SPECIAL TOPICS IN ENGINEERING 3 Credits**ENGR-330 MECHANICS OF MATERIALS 3 Credits**

An introduction to the principles and methods of mechanics of materials analyzing stress, strain and displacement fields in mechanically and thermally loaded components. Pre-requisite: ENGR-210.

FSCI-101 INTRODUCTION TO FORENSIC SCIENCE 4 Credits

Introduces students to the field of forensic science. Will focus on different forms of physical evidence, including their collection, analysis and evidentiary value in a criminal investigation. The laboratory portion of the course will supplement the lecture and allow students to examine evidence using modern techniques and instrumentation. Topics discussed include organic and inorganic chemical analyses of physical evidence, principles of serology and DNA analysis, identification of fresh and decomposed human remains, ballistics, fingerprint analysis, facial reconstruction, drug analysis and forensic entomology. Pre-requisite: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

GEOL-101 PHYSICAL GEOLOGY 4 Credits

Introduction to basic concepts of geology in the context of geologic hazards and geologic resources. Topics covered include: global circulation of water and air, rocks and minerals, plate tectonics, geologic time, deductive reasoning from sparse evidence. Geologic and topographic map reading skills are taught and emphasized, using examples from the local area. Lecture and laboratory. Pre-requisite: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

GEOL-120 INTRODUCTION TO EARTH SYSTEMS 4 Credits

This course will examine the formation of planet Earth, its structure, atmosphere, hydrosphere and biosphere. We will learn about the climate and how the various systems interact with each other. Human impacts on the atmosphere and climate will also be discussed from a scientific perspective. Three hours of lecture and 3 hours of laboratory time per week.

GEOL-190 DIRECTED STUDY IN GEOLOGY 1-12 Credits**GEOL-202 HISTORICAL GEOLOGY 4 Credits**

Emphasis on geologic time; no other discipline offers such a long time perspective relevant to modern decision-making. Includes: review of basic Earth materials; plate-tectonic framework for interpreting Earth history; absolute dating techniques and the age of the Earth's formation; depositional environments and interpretation of sedimentary rocks as a tool of paleogeography; lithostratigraphic principles and relative dating by Steno's laws and cross-cutting relationships; basic principles of paleontology, including overview of taxonomy, processes of fossilization, evolutionary principles, biostratigraphic principles; systematic examination of tectonic setting, paleogeography, paleobiology, and paleoclimate for each period of Earth's history. Lecture and laboratory. Pre-requisite: A grade of 'C' or better in GEOL-101.

GEOL-290 DIRECTED STUDY IN GEOLOGY 1-12 Credits

Additional library and/or field research by individuals based on student/faculty interests. This course can provide a mechanism for students to participate in faculty research projects for academic credit. Pre-requisite: Permission of instructor.

GEOL-291 WORKSHOP IN GEOLOGY 1-12 Credits**GEOL-292 SPECIAL TOPICS IN GEOLOGY 1-12 Credits****GEOL-295 PRACTICUM IN GEOLOGY 1-2 Credits****GEOL-299 RESEARCH ASSISTANTSHIP 1-12 Credits****GEOL-301 GEOLOGIC FIELD METHODS 1-6 Credits**

Six-week course in the field. Principles of geologic mapping in igneous, sedimentary and metamorphic terranes using examples from Hells Canyon. Pre-requisite: Permission of instructor. Lab fee.

GEOL-309 HYDROGEOLOGY 4 Credits

Fundamentals of surface and groundwater movement in a geologic context. Includes hydrologic, geologic, and other factors controlling groundwater flow, occurrence, development, chemistry, and contamination. Groundwater flow theory and aquifer test methods are introduced. Interactions between surface and subsurface hydrologic systems are covered. Some field trips are possible. Introduction to aquifer pumping tests, aquifer analysis, watershed analysis, and water budgets. Field methods are emphasized through consideration of local examples. Lecture and laboratory. Pre-requisite: A grade of 'C' or better in GEOL-101.

GEOL-313 EARTH MATERIALS I 4 Credits

The study of naturally occurring, inorganic crystalline solids with definite chemical structures which give them unique physical properties (minerals). It is an important curricular component for both (1) Geology majors who intend to pursue careers in the Earth Sciences as well as (2) students preparing for teaching careers who expect to teach Earth Science classes at the junior high or secondary level. The study of minerals has ancient roots and was associated with the development of geology, chemistry, and physics. Therefore, this course integrates many of these fields of study. This course introduces mineral chemistry, symmetry and classification; provides basic geologic skills in descriptive mineralogy, including space groups and the use of stereo nets; hand-sample petrography of igneous, metamorphic and sedimentary rocks; and elementary optical methods. Pre-requisite: A grade of 'C' or better in GEOL-101.

GEOL-314 EARTH MATERIALS II 4 Credits

Introduction of descriptive igneous, sedimentary and metamorphic petrography; plate-tectonic framework for interpreting petrogenesis; phase equilibria and basic geochemistry of magmatic systems; geochemistry of weathering and soil formation; pressure-temperature-time relationships of metamorphic facies; and economic geology, including ore mineralogy and resource extraction. Labs emphasize microscopic identification of minerals and textures, and the formulation of petrogenetic interpretations. Lecture and laboratory. Pre-requisite: A grade of 'C' or better in GEOL-313.

GEOL-335 EARTH SURFACE PROCESSES 4 Credits

This course examines the evolution of natural landscapes by water, wind, ice and tectonic processes. Topics include: weathering and mass wasting, neotectonics, fluvial geomorphology, glacial geomorphology, and Quaternary geology field techniques. Approximately one third of instructional time is spent in the field. Lecture and laboratory. Pre-requisite: A grade of 'C' or better in GEOL-101.

GEOL-390 DIRECTED STUDY IN GEOLOGY 1-12 Credits**GEOL-392 SPECIAL TOPICS IN GEOLOGY 1-12 Credits****GEOL-393 SERVICE LEARNING IN GEOLOGY 1-12 Credits**

SERVICE LEARNING IN GEOLOGY.

GEOL-394 INTERNSHIP IN GEOLOGY 1-12 Credits**GEOL-395 PRACTICUM IN GEOLOGY 1-12 Credits****GEOL-399 RESEARCH ASSISTANTSHIP 1-3 Credits****GEOL-420 PRINCIPLES OF GEOCHEMISTRY 3 Credits**

This 400-level course is designed to draw together the themes and topics from other courses in the Earth Science major into an integrated picture of Earth and its interrelated systems, as well as applying chemistry to these systems. The focal discussion will be on the interactions between the atmosphere, hydrosphere, biosphere and lithosphere and current topics of interest related to them. Of particular interest are scientific problems involving Earth's systems such as coral bleaching, climate change, and water pollution. Pre-requisite: CHEM-112 with a grade of C or better. Crosslisted with CHEM-420.

GEOL-421 STRUCTURAL GEOLOGY 4 Credits

Emphasizes 3-dimensional thinking; no other scientific discipline requires the same spatial thinking skills that geology does. This class covers classical and modern concepts of structural geology including: the recognition and description of folds, faults, joints, and metamorphic fabrics in rocks; description and interpretation of stress and strain from these structures; preparation and interpretation of geologic maps and cross-sections. Lecture and laboratory. Pre-requisites: a grade of 'C' or better in GEOL-101.

GEOL-450 EARTH SYSTEMS CAPSTONE 3 Credits

This course is designed to draw together the themes and topics from other courses in the Earth Science major into an integrated picture of Earth and its interrelated systems. The focal discussion will be on the interactions between the major systems and current topics of interest related to them. Of particular interest are scientific problems involving Earth's systems that are, as of yet, unresolved. Pre-requisite: GEOL-120 and NS-380.

GEOL-490 DIRECTED STUDY IN GEOLOGY 1-12 Credits**GEOL-491 WORKSHOP IN GEOLOGY 1-12 Credits****GEOL-492 SPECIAL TOPICS IN GEOLOGY 1-12 Credits****GEOL-495 PRACTICUM IN GEOLOGY 1-12 Credits****GEOL-499 RESEARCH PROJECT AND SEMINAR IN GEOLOGY 1-3 Credits**

Students will conduct and communicate the results of a research project in the Natural Sciences Division. Topics may include the historical, philosophical, cultural and environmental aspects, and the processes of natural science. Requirements of students include satisfactory oral presentation and defense of their research and submission of a written report approved by their advisor to the Natural Sciences Division. Prerequisite: NS-398.

GIS-271 GEOGRAPHIC INFORMATION SYSTEMS 4 Credits

This course will review fundamentals of the Geographic Information Systems; its basic applications and procedures and survey approaches to the use of GIS through problem solving. Pre-requisite: Computer literacy in use of PC systems of database management, spreadsheet analysis and a graphical software package. Lab fee.

GIS-295 PRACTICUM IN GEOGRAPHIC INFORMATION SYSTEMS 1-12 Credits**GIS-390 DIRECTED STUDY IN GEOGRAPHIC INFORMATION SYSTEMS 1-12 Credits****GIS-394 INTERNSHIP IN GEOGRAPHIC INFORMATION SYSTEMS 1-12 Credits****GIS-395 PRACTICUM IN GEOGRAPHIC INFORMATION SYSTEMS 1-12 Credits****GIS-471 ADVANCED GEOGRAPHIC INFORMATION SCIENCE 4 Credits**

An advanced Geographic Information Science course with emphasis on development of a semester long, real-world GIS project using state-of-the-art tools and techniques. Additional emphasis will also be placed on project management including goal setting, timelines and production scheduling. Lecture and laboratory. Pre-requisite: A grade of 'C' or better in GIS-271.

GIS-481 DIGITAL REMOTE SENSING 4 Credits

Computer processing, analysis and interpretation of digital remote sensing data with an emphasis on application of remotely sensed imagery to the analysis of environmental quality and management of natural resources. Pre-requisite: A grade of 'C' or better in GIS-271.

GIS-490 DIRECTED STUDY IN GEOGRAPHIC INFORMATION SYSTEMS 1-12 Credits**GIS-494 INTERNSHIP IN GEOGRAPHIC INFORMATION SYSTEMS 1-12 Credits****GIS-495 PRACTICUM IN GEOGRAPHIC INFORMATION SYSTEMS 1-2 Credits****GIS-499 SENIOR PROJECT AND SEMINAR IN GEOGRAPHIC INFORMATION SYSTEMS 1-3 Credits**

Students will conduct and communicate the results of a research project in the Natural Sciences Division. Topics may include the historical, philosophical, cultural and environmental aspects, and the processes of natural science. Requirements of students include satisfactory oral presentation and defense of their research and submission of a written report approved by their advisor to the Natural Sciences Division. Prerequisite: NS-398.

HLTH-101 INTRODUCTION TO HEALTH PROFESSIONS 1 Credit

This course is for students interested in prospective health professions. It will explore the various health-related programs at LCSC and develop successful study habits for science-related curriculum.

HLTH-215 ELEMENTARY HEALTH SCIENCE/METHODS 3 Credits

A course for teachers. Topics include wellness, fitness, nutrition, weight control, human sexuality, disease prevention, substance use and abuse, injury prevention and emergency care, environmental health, consumerism, mental and emotional wellness. Writing integrated. Fee required.

HLTH-245 DEATH AND DYING 1 Credit

Trends and patterns in death and dying including cross-cultural and historical perspectives, death in popular culture, demography of death, grief and bereavement, dying patient's perspectives and ethical dilemmas.

HLTH-246 HUMAN SEXUALITY 1 Credit

An overview of biological, behavioral and cultural aspects of human sexuality including study of gender, sexually transmitted diseases, pregnancy and sexual dysfunction.

HLTH-247 STRESS MANAGEMENT 1 Credit

Reviews the physical, social and psychological aspects of the human stress response. Provides students with an increased personal awareness of their own stress and a practical application of relaxation and stress reduction techniques.

HLTH-248 BEHAVIOR CHANGE 1 Credit

This course provides a comprehensive overview of behavior change as it relates to public and personal health. The course includes content on lifestyle change and prevention and chronic disease management, with a focus on specific behaviors (i.e. diet and nutrition, tobacco use) and chronic illness (i.e. diabetes, heart disease). This course will introduce students to the various theoretical models of health behavior change and how they relate to both individuals and diverse communities. Barriers and facilitators of lifestyle change and disease management will be covered, as well as the psychosocial predictors of behavior. Health related behavior change strategies including, but not limited to, topics such as physical activity, nutrition, stress reduction, tobacco cessation and obesity will all be addressed. The course will also include an introduction to the science behind multiple-risk behavior change and other future directions of the emerging field of health behavior change.

HLTH-249 HEALTH THROUGH THE LIFESPAN 3 Credits

The purpose of this course is to explore different aspects of health and wellness throughout the lifespan. Topics will include: death and dying, human sexuality, stress management, and behavior change. Material will be particularly well-suited for practitioners in schools, recreation programs, coaching, and exercise settings.

HLTH-253 NUTRITION 3 Credits

Principles of life span nutrition. Includes study of nutritional needs during exercise and the influence social, economical, and ethnic factors play in dietary habits and attitudes. Pre-requisite: ENGL-101 or appropriate placement score and MATH-025 or appropriate placement score.

HLTH-272 FITNESS AND WELLNESS 3 Credits

Provides students with skills and knowledge to practice health-enhancing behaviors and reduce health risks to themselves and others. Focuses on holistic health, exercise, nutrition, substance use and abuse, stress management, posture, care of the back and neck, prevention of cancer and sexually transmitted diseases. Students will use goal-setting and decision-making skills that enhance health. Lecture and participation in physical activity. Cross-listed with KIN-272.

HLTH-290 DIRECTED STUDY IN HEALTH 1-12 Credits**HLTH-291 WORKSHOP IN HEALTH 1-12 Credits****HLTH-292 SPECIAL TOPICS IN HEALTH 1-12 Credits****HLTH-295 PRACTICUM IN HEALTH 1-12 Credits****HLTH-299 RESEARCH ASSISTANTSHIP 1-12 Credits****HLTH-342 COMMUNITY HEALTH 3 Credits**

An overview of health in world communities. Topics include diseases, environmental health, consumer health, school and workplace health, public health policy, global organizations and issues. Students will learn how to access valid health-enhancing products and services.

HLTH-343 SPORT NUTRITION 3 Credits

Nutritional parameters of athletic and fitness performance covered will include intervention planning, energy production, the energy nutrients, vitamins and minerals, principles of balanced diets, timing and composition of intakes, hydration, weight management strategies, and nutritional needs for special situations. Pre-requisite: HLTH-253.

HLTH-352 TECHNOLOGIES FOR HEALTH AND WELLNESS PROFESSIONALS 3 Credits

Strategies and skills for the development, utilization and evaluation of instructional media for program administration, health promotion and teaching in health clubs, corporations, youth organizations, public health, and schools. Fee required.

HLTH-354 ADDICTION AND PERFORMANCE 2 Credits

Drug use and abuse is perhaps the biggest challenge facing sport today. However, in the eye of the storm of public and press opinion and with medals and morals at stake, it can be difficult to gain a clear perspective on this complex issue. This course will explore the hard science behind drug use in sport as well as the ethical, social, political and administrative context. Key topics include: Mode of action and side effects of each major class of drugs used in sport Cutting edge issues such as gene doping and athlete biological passports Latest doping control regulations of the WADA Issues surrounding non-prohibited substances and ergogenic aids in supplements Assessment of the prevalence of drug taking in sport.

HLTH-390 DIRECTED STUDY IN HEALTH 1-12 Credits**HLTH-391 WORKSHOP IN HEALTH 1-12 Credits****HLTH-392 SPECIAL TOPICS IN HEALTH 1-12 Credits****HLTH-395 PRACTICUM IN HEALTH 1-12 Credits****HLTH-399 RESEARCH ASSISTANTSHIP 1-12 Credits**

Graded P/F only.

HLTH-453 HEALTH PROMOTION 3 Credits

This course covers the design, implementation and evaluation of personal, worksite, school and community health promotion programs with a focus on social health marketing. The course explores methods used in both health promotion and health education that is purposely designed to guide individuals and groups toward a healthier lifestyle. Health Promotion will introduce students on the methods and strategies needed to facilitate support groups, select presentation methods, develop effective presentations, develop and select print materials and how to work with media at both the individual and community level. This course will also teach students how to develop the professionalism skills needed today to be a successful health educator or health promotion specialist. At the conclusion of this course students will be able to effectively communicate health education messages and positively influence the norms and behaviors of both individuals and communities in today's multicultural society.

HLTH-454 WELLNESS COACHING 2 Credits

In this course, students will learn to implement theory-based Wellness Coaching strategies to promote and motivate positive psychology and behavior changes that can be used by corporations, clinicians, worksite settings and personal Coaches. Skills learned in this course are versatile and can be used by counselors or individuals interested in life, health, fitness or wellness coaching.

HLTH-490 DIRECTED STUDY IN HEALTH 1-12 Credits**HLTH-491 WORKSHOP IN HEALTH 1-12 Credits****HLTH-492 SPECIAL TOPICS IN HEALTH 1-12 Credits****HLTH-494 INTERNSHIP IN HEALTH 1-12 Credits**

Application of advanced coursework, skills and knowledge to a supervised, practical experience in Kinesiology, Sports Administration, Coaching, Physical Education, Sports Medicine, Physical/Occupational Therapy, Fitness and Wellness. Pre-requisite: Instructor's permission.

HLTH-495 PRACTICUM IN HEALTH 1-12 Credits**HLTH-499 RESEARCH PROJECT AND SEMINAR IN HEALTH 1-12 Credits****ID-160 WATER AND ENERGY 4 Credits**

This course serves as an introductory Scientific Ways of Knowing laboratory science for non-science majors. It will cover concepts related to water and energy as viewed through the lenses of natural science disciplines including physics, biology, earth science, kinesiology, chemistry and environmental science. Fully online laboratory. Pre-requisite: Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

ID-190 DIRECTED STUDY IN INTERDISCIPLINARY 12 Credits**ID-240 INTEGRATED SCIENCE II 4 Credits**

This is the second of a team-taught, place-based, course, which is designed to provide an introduction to multiple scientific disciplines, including biology, chemistry, computer science, earth science, mathematics, and physics around the theme of the greater Lewiston-Clarkston valley watershed. Course content is integrated in order to allow the students the opportunity to use multiple scientific disciplines to understand the world in which they live. The focus in this second course is on topics of local concern including dams plus modules that will vary with instructor (s). The course will include an emphasis on college reading, college writing, collaboration, and using math to solve real-world problems. This is a 4-credit class with 3 hours of lecture a week and approximately 3 hours of laboratory each week. Pre-requisites: NS-140 with a grade of C or better and MATH-144 taken concurrently or permission of instructor.

ID-290 DIRECTED STUDY IN INTERDISCIPLINARY STUDIES 1-12 Credits**ID-291 WORKSHOP IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-292 SPECIAL TOPICS IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-294 INTERNSHIP IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-295 PRACTICUM IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-299 RESEARCH ASSISTANTSHIP 1-12 Credits**

Graded P/F only.

ID-300A ANIMALS AND SOCIETY 3 Credits

This course is an interdisciplinary introduction to the ethical dimensions of relationships between humans and non-human animals. Drawing on the works of philosophers, social and natural scientists, and legal scholars, students will learn about the roles, treatment, and moral standing of animals and the competing values that have shaped human-animal relationships in past and present societies. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300B ART AND CENSORSHIP 3 Credits

Focuses on the social and ethical implications of the artist's creative freedom, particularly how artistic freedom related to personal freedom. Considers issues common to the visual, plastic, musical, and theatrical arts. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300C ETHICS AND IDENTITY 3 Credits

This course takes an interdisciplinary approach to the study of ethical questions and cultural values as they relate to differences in race, ethnicity, gender, social class, and other categories that together form the basis of identity in the social world. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission. This course may include DEI-related content. If you are taking this class as a program or graduation requirement, you may work with your advisor to find an alternative class.

ID-300D ETHICS AND ECOLOGY 3 Credits

Introduces the nature of ethical reasoning in relation to the ecology and the impact of human culture and scientific thought on ecology. Students face questions arising from their ethical obligations to each other, to non-human species, and to the planet itself. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300E ETHICS AND TECHNOLOGY 3 Credits

Explores ethical challenges of living and working in a technological world. Students consider the personal, social, and philosophical implications of global technology. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300F GENDER AND CULTURE 3 Credits

This course examines issues surrounding gender, sex, and sexuality from a cross-cultural perspective. The focus is on learning to think about topics of gender and sexuality holistically as they are embedded in the cultural systems of different societies and as they relate to other aspects of a given society, including the contemporary United States. In particular, students learn to analyze the cultural and social constructions of gender in different societies and in the US at different times. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission. This course may include DEI-related content. If you are taking this class as a program or graduation requirement, you may work with your advisor to find an alternative class.

ID-300G HEALTH INTEGRATIVE SEMINAR 3 Credits

This course explores health through three different academic disciplines: natural science, language and literature, and fine arts. The class is designed to develop value clarifying abilities over a wide range of value considerations (moral, ethical, physical, social, mental, spiritual, emotional, aesthetic, philosophic, and scientific). Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300H LAW AND SOCIETY 3 Credits

This course provides a social scientific understanding of the underlying relationship between law, values, and society. It examines how societal values (order, morality, democracy, property, liberty, multiculturalism, and equality) and societal factors (power, discretion, race, gender, and wealth) intersect with the creation, enforcement, and interpretation of public policy. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300J TERRORISM CONTEMPORARY ERA 3 Credits

An interdisciplinary survey into the phenomena of political violence and terrorism is the core of this course. Historical, ethnic, religious, and ideological roots of terrorism are examined to put this behavior in sound, ethical perspectives with respect to the values of society and the goals of its perpetrators. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300K VALUES AND SPORTS 3 Credits

This course explores Sport through a variety of academic disciplines including social science, fine arts, history and philosophy. The class is designed to develop value clarifying abilities over a wide range of value considerations (moral, physical, social, mental, spiritual, emotional, aesthetic, and philosophic). Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300L VIETNAM 3 Credits

This course will examine Vietnamese society and history particularly the nation's relationship with the United States in the 20th Century in order to explore the question of values and value conflicts. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300M VULNERABLE POPULATIONS 3 Credits

Using an interdisciplinary approach (drawing on literature, history, philosophy, ethics, medicine, and media amongst others), this course will facilitate an understanding of issues facing vulnerable populations both locally and worldwide, with a focus primarily on women and children. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300N WILDERNESS 3 Credits

This course examines the concept of wilderness, the ethics of interactions between humans and wilderness spaces, and how social, cultural, political, and economic values influence our understanding of wilderness. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300P DISEASES AND SOCIETY 3 Credits

This course is an integrative seminar in ethics and values. Students will develop and implement critical thinking, inquiry, and problem-solving skills. The writing-integrated course will investigate social, cultural, scientific, and humanistic questions as applied to individuals and groups. Using an interdisciplinary approach, the class will facilitate understanding of issues of local and global concern. More specifically, in this course students will examine the diverse ethics and value issues associated with communicable diseases and epidemics such as cholera, HIV-AIDS, the Black Death. Students will explore how diseases affect communities at both a global and local level from multiple perspectives. Students also will investigate the relationship between disease epidemics and public health policies. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300Q ECONOMICS OF GOOD AND EVIL 3 Credits

An interdisciplinary seminar in ethics and values that examines literary texts in the tradition of the humanities, social sciences, and economics. Seeks to answer questions related to normative issues -- What makes an economy good or bad? How has the field of economics evolved within the ecosystem of human values? Writing integrated. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300R LEADERSHIP AND ETHICS 3 Credits

Students will develop a greater understanding of the moral responsibilities of leadership. Leaders in a variety of contexts and cultures will be studied. It will integrate learning from previous coursework as students examine ethical issues leaders face in today's environment. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300S NORTHWEST CULTURE/HISTORY/LITERATURE 3 Credits

Through a study of regionalist ethics and of Northwestern history, values and literature, this seminar explores the Northwest region and studies the intersection of values, historical consciousness and writing in the Northwest. Writing integrated. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300T PROPAGANDA 3 Credits

Traces the origins, examines the practices and considers the consequences of propaganda in both totalitarian and democratic societies. The ethical implication of propaganda will be explored by applying relevant ethical and moral codes to a variety of case studies. Writing integrated. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300U WOMEN IN THE 20TH CENTURY 3 Credits

The ethical issues confronted by American women are examined by study of literary and historical texts as well as through their own writing. Writing integrated. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission. Cross-listed with SS-350.
 This course may include DEI-related content. If you are taking this class as a program or graduation requirement, you may work with your advisor to find an alternative class.

ID-300V GANDHIAN ETHICS AND VALUES 3 Credits

Although best known as a spiritual leader and the father of India's independence, Mohandas Gandhi also stands out as an important philosopher and thinker. This course will provide students a valuable opportunity to expand their intellectual tool kit by learning about Gandhian philosophy and using it as a lens through which to consider various questions related to ethics and values. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300W ETHICS OF FOOD AND AGRICULTURE 3 Credits

This purpose of this course is to explore the values and ethics that underlie our food and agricultural systems and the choices we make regarding our food. Examples of topics to be covered include 1) farm labor rights, 2) sustainable use of land, and 3) use of technology in our food supply. Students will evaluate these topics on both a local and global scale and from a variety of disciplinary lenses in the social and natural sciences. Pre-requisite: Completion of ENGL-102 or ENGL-109 and 24 credit hours in the General Education Core or instructor permission.

ID-300X ETHICS: CIVIL RIGHTS MOVEMENTS 3 Credits

This course will focus on the "long Civil Rights Movement" for African-Americans from the 19th century to the present day, using history, music, literature, and popular culture to explore the many perspectives. The course will study events of historical significance (the Montgomery bus boycott, the march to Selma, Dr. King's assassination, etc.) as well as those of artistic significance (the Harlem Renaissance, Afro-centric music, protest music, etc.), and examine how both have had a lasting effect on popular culture as well as have shaped the civil rights. Pre-requisite: ENGL-101 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-300Y SALMON RIVER GEOLOGY, BIOLOGY, HUMAN HISTORY 3 Credits

The primary purpose of the integrative seminar core course is to develop interdisciplinary abilities in values and ethics clarification. In this section, we focus on the development of the Salmon River ecosystem beginning with its geological formation, continuing to its biological evolution, and arriving at its human habitation and economic significance. We will reflect upon the ethics and values that inform our stewardship for this remarkable landscape, being informed by our understanding its formation, traditional uses, natural character, and history.

ID-300Z HAPPINESS 3 Credits

This course introduces students to the philosophy and science of human happiness, particularly focusing on how values, behaviors, and social structures can promote or inhibit well-being and the ethical dimensions of the pursuit of happiness. Students are encouraged to apply evidence-based insights on happiness to their own lives. Prerequisites: ENGL-102 or ENGL-109 and a total of 24 credit hours in the General Education Core or instructor permission.

ID-301A HELLS CANYON INSTITUTE 3 Credits

The Hells Canyon Institute takes an interdisciplinary approach to questions of ethics and values relating to the concept of wilderness. This course will focus on a particular place - Hells Canyon of the Snake River - and will include on-campus class meetings and a week-long field school in Hells Canyon. Pre-requisite: ENGL-102 or ENGL-109, and a total of 24 credit hours in the General Education Core or instructor permission.

ID-321 PRIOR LEARNING PORTFOLIO DEVELOPMENT 1 Credit

This course will assist students to explore earning credit through knowledge and skills acquired through prior training and experience because of a job or other experiential learning opportunities. It will help students work through the process of developing and submitting an effective portfolio to document their prior learning. This course will also discuss additional methods of obtaining credit through prior learning and experience.

ID-350 INDIVIDUALIZED PROGRAM DESIGN 2 Credits

This course empowers students to take ownership of their undergraduate education by developing the skills and self-knowledge necessary to design a coherent, purposeful course of study. Rather than viewing course selection as a series of isolated decisions, students will learn to approach their academic planning strategically by connecting their choices to personal ideals, intellectual interests, career aspirations, and long-term goals.

ID-360 LEADERSHIP 3 Credits

Explores the concept of leadership from an interdisciplinary perspective: psychological determinants of leaders and followers, political factors of governance, sociological issues connecting individuals and small groups, anthropological factors in tracking societal transformations and management skills in the practice of leadership.

ID-390 INTER. STUDY FIELD TRIP - SALMON RIVER 3 Credits

This course is comprised of a field trip, rafting from Boundary Creek on the Middle Fork of the Salmon River to Carey Creek on the Main Salmon. It is an opportunity to apply the knowledge gained from the pre-requisite class ID300Y - Salmon River Geology, Biology, Human History. Pre-requisite: ID-300Y.

ID-392 Portfolio 1 Credit**ID-394 INTERNSHIP IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-399 RESEARCH ASSISTANTSHIP 1-12 Credits**

Graded P/F only.

ID-412 ADVANCED PATHOPHYSIOLOGY AND PHARMACOLOGY 1 Credit

An in depth study of the physiology, manifestations, and treatment of human disease processes in one disease, such as septicemia. Pre-requisites: BIOL-312 and NU-312 with a grade of C or better.

ID-450 INTERDISCIPLINARY STUDIES SEMINAR 3 Credits

Seminar focuses on the theory and practice of interdisciplinary thinking and interdisciplinary approaches to complex problem solving, culminating in a problem-based interdisciplinary research paper. Pre-requisite: ENGL-102.

ID-490 DIRECTED STUDY IN INTERDISCIPLINARY STUDIES 1-12 Credits**ID-491 WORKSHOP IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-492 SPECIAL TOPICS IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-494 INTERNSHIP IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-495 PRACTICUM IN INTERDISCIPLINARY STUDIES 1-12 Credits****ID-499 RESEARCH ASSISTANTSHIP IN INTERDISCIPLINARY STUDIES 1-12 Credits**

Graded P/F only.

KIN-120A BALLET 1-2 Credits

This course number sequence includes instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-120B BALLROOM DANCE 1-2 Credits

This course number sequence includes instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122C BELLY DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122D CELTIC DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122E COUNTRY WESTERN DANCE-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122F FOLK DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122G HAWAIIAN DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122H HIP HOP DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122J JAZZ DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122K LATIN DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122M LINE DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122N MODERN/CONTEMPORARY DANCE-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122P SQUARE DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122Q SOCIAL DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122R SWING DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122S SWING COUNTRY WESTERN DANCE- INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122T TAP DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-122U ZUMBA DANCE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of dance courses including but not limited to ballet, ballroom, belly, hip hop, jazz, line, modern/contemporary, square, and swing dance. Courses are graded Pass/Fail. Some courses require fees.

KIN-130A BURN/FIRM SPORT CONDITIONING 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-130B BODY SCULPTING 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-130U YOGA-MEDITATION 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-130V YOGA RETREAT WEEKEND 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-130W XFIT 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-130X FITNESS YOGA 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-130Y HOT YOGA 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-130Z ABS, HIPS, AND GLUTES 1-2 Credits

This course number sequence includes instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-131A BURN/FIRM SPORT CONDITIONING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131B BODY SCULPTING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131C BOOT CAMP FITNESS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131D CONDITIONING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131E CONDITIONING FOR ATHLETES-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131F FITNESS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131G JOGGING AND CONDITIONING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131H PILATES-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131I AEROBIC CONDITIONING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-131J RUN/WALK/JOG-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131K SPINNING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction on a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131L AEROBIC DANCE - BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-131M STEP AEROBICS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131N STRENGTH AND CONDITIONING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131O HIGH INTENSITY INTERVAL TRAINING - BEG 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-131P T'AI CHI-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131Q T'AI CHI-MEDITATION-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131R TRX STRENGTH DEVELOPMENT-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131S WEIGHT TRAINING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131T YOGA-HATHA-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131U YOGA-MEDITATION-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131V YOGA RETREAT WEEKEND-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131W XFIT-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-131X FITNESS YOGA-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-131Y HOT YOGA-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-131Z ABS, HIPS AND GLUTES- BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-132A BURN/FIRM SPORT CONDITIONING- INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132B BODY SCULPTING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132C BOOT CAMP FITNESS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132D CONDITIONING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132E CONDITIONING FOR ATHLETES-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132F FITNESS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132G JOGGING AND CONDITIONING-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction on a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132H PILATES-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132I AEROBIC CONDITIONING-INT/ADV 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-132J RUN/WALK/JOG-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132K SPINNING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132L AEROBIC DANCE-INT/ADV 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-132M STEP AEROBICS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132N STRENGTH AND CONDITIONING-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132O HIGH INTENSITY INTERVAL TRAINING-INT/ADV 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-132P T'AI CHI-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132Q T'AI CHI-MEDITATION-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132R TRX STRENGTH DEVELOPMENT-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132S WEIGHT TRAINING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132T YOGA-HATHA-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132U YOGA-MEDITATION-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132V YOGA RETREAT WEEKEND-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132W XFIT-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including but not limited to body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training and yoga. Courses are graded Pass/Fail. Some courses require fees.

KIN-132X FITNESS YOGA-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-132Y HOT YOGA-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-132Z ABS, HIPS, AND GLUTES- INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of fitness and group exercise courses including, but not limited to, body sculpting, jogging/conditioning, pilates, spinning, step aerobics, T'ai Chi, weight training, and yoga. Courses are graded pass/fail. Some courses require fees.

KIN-140A ARCHERY 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140B BADMINTON 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140C BILLIARDS 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140D BOWLING 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140E DISC GOLF 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140F GOLF 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140G GYMNASTICS 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140H HANDBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140J ICE SKATING 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140K PICKLEBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140M SHOTGUN SHOOTING 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140N STUNTS AND TUMBLING 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140P TENNIS 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140Q TRACK AND FIELD 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140R Triathlon 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140S RACQUETBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-140T RECREATIONAL SPORTS 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to archery, badminton, bowling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-141S RACQUETBALL-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-141T RECREATIONAL SPORTS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-141U RIFLERY-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-141V TABLE TENNIS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-141W WRESTLING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/fail. Some courses require fees.

KIN-142A ARCHERY-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142B BADMINTON-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142C BILLARDS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142D BOWLING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142E DISC GOLF-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142F GOLF-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142G GYMNASTICS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142H HANDBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142J ICE SKATING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142K PICKLEBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142M SHOTGUN SHOOTING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142N STUNTS AND TUMBLING-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142P TENNIS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142Q TRACK AND FIELD-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142R Triathlon-Intermediate/Advanced 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142S RACQUETBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142T RECREATIONAL SPORTS-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142U RIFLERY-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142V TABLE TENNIS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-142W WRESTLING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to archery, badminton, bowling, bicycling, disc golf, golf, shot gun shooting, gymnastics, tennis, track and field, racquetball, wrestling. Courses are graded Pass/Fail. Some courses require fees.

KIN-150 TEAM SPORTS 1-2 Credits

Flag football, field and floor hockey, softball, basketball, volleyball, soccer, team handball, speedball, baseball. Graded P/F only. Some courses require fees.

KIN-150A AIKIDO 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-150B CHI GONG 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-150C FITNESS: 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-150D FITNESS: 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-151K KICKBOXING-FITNESS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-151M MIXED MARTIAL ARTS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-151N SELF DEFENSE-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-151P TAE KWON DO-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152A AIKIDO-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152B CHI GONG-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152C FITNESS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152D FITNESS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152E FITNESS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152F HAPKIDO-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152G JUDO-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152H KARATE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152J KICKBOXING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152K KICKBOXING-FITNESS-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152M MIXED MARTIAL ARTS-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152N SELF DEFENSE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-152P TAE KWON DO-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to judo, karate, kickboxing, mixed martial arts, self defense. Courses are graded Pass/Fail. Some courses require fees.

KIN-160 INDIVIDUAL AND DUAL SPORTS 1 Credit

Archery, badminton, cycling, bowling, tennis, track and field, golf, racquetball, wrestling, gymnastics, conditioning, skiing, backpacking, martial arts, aerobics, weight training, jazzercise, billiards, jogging, stretch/flexibility training. Graded P/F only. Some courses require fees.

KIN-162J HUNTER EDUCATION-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to backpacking, bicycling, camping, climbing, horseback riding, hunter education, skiing, snowboarding, snow shoeing. Courses are graded Pass/Fail. Some courses require fees.

KIN-162K ORIENTEERING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to backpacking, bicycling, camping, climbing, horseback riding, hunter education, skiing, snowboarding, snow shoeing. Courses are graded Pass/Fail. Some courses require fees.

KIN-162M SKIING-DOWNHILL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to backpacking, bicycling, camping, climbing, horseback riding, hunter education, skiing, snowboarding, snow shoeing. Courses are graded Pass/Fail. Some courses require fees.

KIN-162N SKIING-CROSS COUNTRY-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to backpacking, bicycling, camping, climbing, horseback riding, hunter education, skiing, snowboarding, snow shoeing. Courses are graded Pass/Fail. Some courses require fees.

KIN-162P SNOW BOARDING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to backpacking, bicycling, camping, climbing, horseback riding, hunter education, skiing, snowboarding, snow shoeing. Courses are graded Pass/Fail. Some courses require fees.

KIN-162Q SNOW SHOEING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to backpacking, bicycling, camping, climbing, horseback riding, hunter education, skiing, snowboarding, snow shoeing. Courses are graded Pass/Fail. Some courses require fees.

KIN-170 DANCE 1-2 Credits

Folk, social, square, jazz, modern, country swing, and line dances. Graded P/F only. Some courses require fees.

KIN-170A BASEBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170B BASKETBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170C FIELD HOCKEY 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170D FOOTBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170E FOOTBALL-FLAG 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170F ICE HOCKEY 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170G LACROSSE 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170H RUGBY 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170J SOCCER 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170K SOFTBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-170M SPEEDBALL 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-171R VOLLEYBALL-SAND-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172A BASEBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172B BASKETBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172C FIELD HOCKEY-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172D FOOTBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172E FOOTBALL-FLAG-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172F ICE HOCKEY-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172G LACROSSE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172H RUGBY-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172J SOCCER-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172K SOFTBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172M SPEEDBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172N TEAM HANDBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172P ULTIMATE FRISBEE-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172Q VOLLEYBALL-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-172R VOLLEYBALL-SAND-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to baseball, basketball, football, soccer, softball, team handball, ultimate Frisbee, volleyball. Courses are graded Pass/Fail. Some courses require fees.

KIN-180 AQUATICS 1 Credit

Swimming, sailing, canoeing, rafting, fly and bait casting, sculling, aquatic conditioning, lifesaving, water safety instructor. Graded P/F only. Some courses require fees.

KIN-180A AEROBICS-AQUA 1-2 Credits

This course number sequence includes instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181J LIFE GUARD CERTIFICATION-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181K PADDLE AND ROW-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181M RAFTING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181N ROWING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181P SAILING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181Q SCUBA-PADI OPEN WATER-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181R SWIMMING LESSONS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181S SYNCHRONIZED SWIM-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181T WATER GAMES-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181U WATER POLO-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181V WATER SAFETY INSTRUCTOR CERTIFICATION- BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181W WATERSKIING-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-181X WATER WALKERS-BEGINNING 1-2 Credits

This course number sequence includes beginning instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-182A AEROBICS-AQUA-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-182S SYNCHRONIZED SWIMMING-INTERMEDIATE/ ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-182T WATER GAMES-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-182U WATER POLO-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-182V WATER SAFETY INSTRUCTOR CERTIFICATION- INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-182W WATERSKIING-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-182X WATER WALKERS-INTERMEDIATE/ADVANCED 1-2 Credits

This course number sequence includes intermediate/advanced instruction in a variety of courses including but not limited to aquatic conditioning, canoeing, fly casting, life guard certification, paddle/row, rafting, scuba diving, swim lessons, water games, Water Safety Instructor certification (WSI), water aerobics, water walkers. Courses are graded Pass/Fail. Some courses require fees.

KIN-189 GARDENING FOR WELLNESS 1 Credit

Wellness is an active, lifelong process of becoming aware of choices and making decisions toward a more balanced and fulfilling life. Wellness is centered on connections and the idea that the mind, body, spirit, and community are all interrelated and interdependent. The primary purpose of this class is to practice and explore gardening as a lifelong wellness activity. The secondary purpose is to participate in campus and community gardens, using gardening time and projects to enhance these gardens for educational purposes.

KIN-190 DIRECTED STUDY IN KINESIOLOGY 1-12 Credits**KIN-192 SPECIAL TOPICS IN KINESIOLOGY 1-12 Credits**

Selected topics of current interest related to coaching , sport administration, fitness and wellness.

KIN-193 SL: Youth Program Development 2 Credits**KIN-215 WEIGHT MANAGEMENT 1 Credit**

Weight management is complex and involves a variety of lifestyle changes. This course is designed to give students the practical skills and tools needed to avoid common roadblocks and obstacles encountered in weight management. Using evidence based approaches to weight management, this course will encompass a variety of interdisciplinary topics, including nutrition, physical activity, behavior change, goal setting, stress management, improved sleep, genetics, culture, environment, and community-based opportunities.

KIN-216 PHYSICAL EDUCATION FOR THE ELEMENTARY TEACHER 2 Credits

Designed to aid the classroom teacher in developing and implementing physical education programs in elementary and middle schools. Cross-listed with ED-216.

KIN-220 SOCIAL-CULTURAL ASPECTS OF SPORTS 3 Credits

Investigation and discussion of the interrelationship among sports, culture and society. Broad overview of selected socio-cultural factors influencing and affected by sport. Introduction to the academic discipline of Sociology of Sport.

KIN-221 HISTORY OF SPORT 3 Credits

This course is designed to explore sport and its place in history. Additionally, the intersection of sport with race, ethnicity, sex, gender, class, labor, capital, politics, patriotism, and national identity will be explored.

KIN-241 SPORTS OFFICIATING 2 Credits

General mechanics of game administration and officiating football, basketball, softball, baseball, volleyball and/or soccer. Following study of rules and sport specific techniques, the student will practice by officiating games.

KIN-248 SPORTS MEDICINE 3 Credits

Laboratory and classroom experience related to the cause, prevention, rehabilitation and care of sports injuries. General principles of injury prevention and safety will be covered. This class is designed for coaches, teachers and those interested in sports medicine. Fee required.

KIN-260 INTRODUCTION TO KINESIOLOGY AND HEALTH 1 Credit

An introductory course for students interested in careers in sport administration, coaching, exercise science, personal training, corporate fitness and wellness, recreation, and physical education teaching. An overview of careers, professional literature and organizations, current issues, philosophy, and history.

KIN-261 SKILL AND ANALYSIS: COURT SPORTS 1 Credit

This course is designed for the personal improvement in the skill and knowledge necessary to teach and participate in Court Sports such as: pickleball, badminton, tennis, basketball, volleyball, etc. This will occur through a survey of applications and techniques of the sports as well as classroom management practices. Students will also establish competence in safety considerations and appropriate teaching progressions. This class will prepare students to teach Court Sports in a sequential and developmental manner. Material can be applied to schools, recreation programs and coaching.

KIN-262 SKILL AND ANALYSIS: FIELD SPORTS 1 Credit

This course is designed for the personal improvement in the skill and knowledge necessary to teach and participate in Field Sports such as: softball, Ultimate Frisbee, soccer, flag football, etc. This will occur through a survey of applications and techniques of the sports as well as classroom management practices. Students will also establish competence in safety considerations and appropriate teaching progressions. This class will prepare students to teach Field Sports in a sequential and developmental manner. Material can be applied to schools, recreation programs and coaching.

KIN-267 SKILL/ANALYSIS: STRENGTH DEVELOPMENT 1 Credit

This course is designed to give the student a working knowledge of strength development and its many benefits. Class time will be devoted to learning proper techniques, program design, and the many variations in training. The skills and knowledge gained in this class will prepare each student to work with a variety of clients in developing muscle endurance and strength for enhanced health and performance.

KIN-268 SKILL AND ANALYSIS: CORE AND FLEXIBILITY 1 Credit

This course is designed to give students interested in personal training, strength and conditioning coaches and other fitness professionals the working knowledge needed to provide safe, effective and appropriate core and flexibility programs. The course will teach students to recognize dysfunctional movement patterns and identify weak or tight muscles of the core, the central region of the human body, consisting of musculoskeletal structures from the abdomen, the spine, the pelvis and the hips (Kibler et al. 2006). With this knowledge students will learn how to design a core training program based on the individual goals, needs and fitness levels of clients. The course will also introduce stretching methodology and evidence-based program designs. Numerous flexibility exercises that can be used to develop safe, effective stretching programs that address increased flexibility, enhanced athletic performance and the reduction of injuries will be covered. This course is essential for strength and conditioning coaches, personal trainers, group fitness instructors or rehabilitation professionals.

KIN-269 SKILL AND ANALYSIS: EDUCATIONAL GYM&MOV 1 Credit

This course is designed for the personal improvement in the skill of in Educational Gymnastics (EG) and Movement Forms (MF) through a survey of applications and techniques of the activities as well as classroom management practices. This class will prepare students to teach EG and MF in a sequential and developmental manner. Material can be applied to schools, recreation programs and coaching.

KIN-271 SKILL ANALYSIS: KINESIOLOGY 3 Credits

The purpose of this course is to provide students with the knowledge, skills, and abilities to properly demonstrate, analyze, and teach fundamental movements in team and individual sports, strength training, core/flexibility exercises, and dance/gymnastics. This will occur through a survey of applications and techniques of select sports (e.g., Court/Field sports, dance, and gymnastics), and strength and core/flexibility exercises. Students will also establish competence in safety considerations and appropriate teaching progressions by actively engaging in skill analysis throughout the semester. This class will prepare students to teach and analyze these skills in a sequential and developmental manner. Material can be applied to schools, recreation programs, coaching, and exercise settings. A typical day will include in-class discussions, skill demonstrations, skill analysis, skill practice, and peer teaching.

KIN-272 FITNESS AND WELLNESS 3 Credits

Provides students with skills and knowledge to practice health-enhancing behaviors and reduce health risks to themselves and others. Focuses on holistic health, exercise, nutrition, substance use and abuse, stress management, posture, care of the back and neck, prevention of cancer and sexually transmitted diseases. Students will use goal-setting and decision-making skills that enhance health. Lecture and participation in physical activity. Cross-listed with HLTH-272.

KIN-290 DIRECTED STUDY IN KINESIOLOGY 1-12 Credits**KIN-291 WORKSHOP IN KINESIOLOGY 1-12 Credits**

Workshops in Kinesiology, Physical Education, Athletics, Sports Medicine, and/or Health Promotion.

KIN-292 SPECIAL TOPICS IN KINESIOLOGY 1-12 Credits

Selected topics of current interest related to coaching, sport administration, fitness and wellness.

KIN-295 PRACTICUM IN KINESIOLOGY 1-12 Credits**KIN-299 RESEARCH ASSISTANTSHIP 1-12 Credits**

Graded P/F only.

KIN-340 ADVANCED COACHING THEORY 2 Credits

This course is designed to provide students with the knowledge and skills needed for success in the coaching profession. In addition, students will understand how to use their skill set in a practical and applied manner. Topics to be covered include, but are not limited to, building a coaching philosophy, recruiting practices and principles, camp design and facilitation, and understanding and implementing the NASPE National Coaching Standards. Students who complete this course will also complete the National Federation of State High School Associations (NFHS) fundamentals of Coaching Certification.

KIN-341 TECHNIQUES AND METHODS OF COACHING BASKETBALL 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Reviews current research and issues.

KIN-342 TECHNIQUES AND METHODS OF COACHING BASEBALL 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Applications made to the coaching of softball. Reviews current research and issues.

KIN-343 TECHNIQUES AND METHODS OF COACHING TRACK AND FIELD 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Reviews current research and issues.

KIN-344 TECHNIQUES AND METHODS OF COACHING FOOTBALL 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Reviews current research and issues.

KIN-345 TECHNIQUES AND METHODS OF COACHING VOLLEYBALL 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Reviews current research and issues.

KIN-346 TECHNIQUES AND METHODS OF COACHING SOCCER 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Reviews current research and issues.

KIN-347 TECHNIQUES AND METHODS OF COACHING TENNIS AND GOLF 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Reviews current research and issues.

KIN-349 TECHNIQUES AND METHODS OF COACHING WRESTLING 2 Credits

Examines skill development, coaching techniques, offensive and defensive styles of play, game strategies, conditioning techniques, and care and selection of equipment. Reviews current research and issues.

KIN-352 YOUTH SPORTS AND RECREATION 3 Credits

Methods, materials and practice in performing, teaching and coaching K-8 age appropriate physical activity. Includes assessment techniques, curriculum design and organizational procedures for teacher education students. Pre-requisite: Sophomore standing. Fee required.

KIN-355 STRATEGIES FOR TEACHING PHYSICAL ACTIVITIES 3 Credits

Designed to prepare students who will teach or coach sports and physical activity to adolescents and adults in schools as well as in private and public recreation programs. Focuses on lesson design, best teaching/coaching practices, program planning, organization and administration. Includes participation and skill analysis in a variety of activities. Fee required.

KIN-361 BIOMECHANICS LABORATORY 1 Credit

Laboratory component of the biomechanics course. Emphasis will be place on the application of concepts learned in lecture to rehabilitation and sport situations. This will occur through hands-on activities and experiments involving contemporary forms of biomechanical instrumentation. Pre-requisite/co-requisite: KIN-363.

KIN-362 BIOMECHANICS 3 Credits

The anatomical and mechanical analysis of the body in motion. Pre-requisite: BIOL-175 or BIOL-227 and Math Level C or higher. Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

KIN-363 PHYSIOLOGY OF EXERCISE 3 Credits

The study of how the human body adapts physiologically to the acute stress of exercise or physical activity, and the chronic stress of physical training. Fee required. Recommended pre-requisite: KIN-272/HLTH-272 and/or BIOL-175 or BIOL-252.

KIN-364 EXERCISE PHYSIOLOGY LABORATORY 1 Credit

The application of physiological principles toward understanding the physiological adjustments that occur to maintain homeostasis in the exercising human. Pre-requisite/co-requisite: KIN-362.

KIN-365 CLINICAL EXERCISE PHYSIOLOGY & PRESCRIPTION 3 Credits

This course provides the foundational understanding of the pathophysiological processes of various common chronic conditions. Emphasis will be placed on the acute and chronic responses to exercise in patients at risk for or having cardiac, pulmonary, metabolic and other diseases. Pre-requisite: KIN-363 or BIOL-228.

KIN-370 MOTOR LEARNING/MOTOR DEVELOPMENT 3 Credits

Provides the teacher, coach, or self-instructing athlete with a comprehensive understanding of the developmental (physical, psychological, and social) processes involved in the learning of sport skills. Explores useful training ideas for all types of performers (beginners-advanced, young-old, male-female) in all types of sports and wellness professionals.

KIN-381 TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION 3 Credits

The study of basic statistical methods and research design as applied in Kinesiology. Pre-requisite: A grade of 'C' or better in MATH-025 or appropriate placement score.

KIN-390 DIRECTED STUDY IN KINESIOLOGY 1-12 Credits**KIN-391 WORKSHOP IN KINESIOLOGY 1-12 Credits****KIN-392 SPECIAL TOPICS IN KINESIOLOGY 1-12 Credits****KIN-395 PRACTICUM IN KINESIOLOGY 1-12 Credits****KIN-399 RESEARCH ASSISTANTSHIP 1-12 Credits**

Graded P/F only.

KIN-410 SPORTS PSYCHOLOGY 3 Credits

Application of the principles and methodologies of psychology to athletics. Topics include individual philosophies of sport, motivation, personality of coaches and athletes, recreational sports for children, psychological testing, training and learning principles, mind/body relationships, and the effects of anxiety, arousal, and relaxation on performance and current research in the field. Pre-requisite: PSYC-101 or PSYC-205 or permission of instructor and Sophomore Standing. Cross-listed with PSYC-410.

KIN-411 EXERCISE PSYCHOLOGY 3 Credits

The application of the principles and methodologies of psychology to physical activity and sedentary behavior. Pre-requisite: PSYC-101 or permission from the instructor.

KIN-412 SPORT & EXERCISE PSYCHOLOGY 3 Credits

The application of the principles and methodologies of psychology to physical activity, sedentary behavior, and sport. Pre-requisite: PSYC-101 or permission from instructor.

KIN-421 PHILOSOPHY OF SPORT 3 Credits

This course is designed to introduce students to philosophical concepts and their application to sport.

KIN-425 ETHICAL DECISION-MAKING SPORT LEADERS 3 Credits

The study of moral reasoning, rationality, and reflection on ethical dilemmas in sport using nonfiction short stories, documentary video, and movies. Pre-requisite: A grade of 'C' or better in ENGL-101 or appropriate placement score and Junior standing.

KIN-433 BALANCE AND MOBILITY 3 Credits

The course is designed for students interested in helping individuals especially senior citizens protect themselves from injury-causing falls. The course content will focus on the aging process, postural strategies, gait patterns, multi-sensory training, strength/flexibility activities, and balance/mobility assessments and strategies. Students will learn how to administer screenings and assessments, develop health plans, design lessons/activities and teach classes. Pre-requisite: Sophomore standing.

KIN-434 EXERCISE PRESCRIPTION 3 Credits

The purpose of this course is to explore principles of fitness assessment and exercise prescription. Both laboratory and field tests may be used for assessing physical fitness components in class. Students will learn to evaluate and write exercise programs for a variety of domains including cardiorespiratory fitness, muscular fitness, body composition, flexibility, and balance. Pre-requisite: KIN-272. Pre/Co-requisite: KIN-363.

KIN-435 AGING AND PHYSICAL ACTIVITY 3 Credits

This course is designed to provide students an understanding of the aging process particularly in relation to aspects of health and wellness. Intergenerational service learning, consisting of structured, planned activities involving meaningful interaction between students and older adults will serve as the foundation of the course format.

KIN-436 PERSONAL/GROUP TRAINING CERT PREP 3 Credits

The purpose of this course is to give students the knowledge, skills and abilities needed to prepare and help pass widely recognized certified personal training (CPT) exams and group fitness (GFI) exams. The course will also provide necessary up-to-date content for individuals striving to stay informed amid ongoing advances in exercise and fitness research.

KIN-455 MARKETING & ADVERTISING SPT & EXRS PROF 3 Credits

This course is designed to connect marketing and advertising principles to the practices of health, sport, and exercise professionals through the examination of theory, research, and current issues in the marketing of health, exercise, and sport products and programming.

KIN-467 PHYSICAL ACTIVITY AND RECREATION FOR INDIVIDUALS WITH SPECIAL NEEDS 3 Credits

Study of the categories of exceptionality. Socio-cultural dimensions of learning and teaching are examined. Strategies for teaching and assisting individuals with special needs and a wide variety of abilities in sport and physical activity. Includes field experiences with Special Olympics, physical and occupational therapists, and adapted physical educators in schools. Cross-listed with SE-467.

KIN-472 OUTDOOR EDUCATION 3 Credits

Study and practice of outdoor leadership skills, expedition planning, environmental ethics. Students will learn a variety of outdoor skills including backpacking, cross-country skiing, fly and bait casting, orienteering rock climbing and biking. Field trips will be required. Cross-listed with RC-472.

KIN-484 COMMUNITY RELATIONS IN SPORT 3 Credits

This course is designed to introduce students to areas of community relations in sport, including, but not limited to public relations campaigns, the relationship between sport organizations and media, and effective communication strategies with the media and other stakeholders.

KIN-485 SPORT LAW 3 Credits

This course is designed to introduce students to common legal concepts and to explore legal cases which have an impact on the business and culture of sport.

KIN-486 ORGANIZATION AND ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION, RECREATION, ATHLETICS 3 Credits

Designed for administration in athletics, schools, recreation, private sector fitness/wellness programs. Students will explore legal issues, economics, finance and governance in sports while developing skills in computing, budgeting, marketing, fundraising, event management, program planning, scheduling, facility and personnel management. Pre-requisite: Sophomore Standing.

KIN-487 SPORT ADMINISTRATION 3 Credits

This senior level class will explore various topics specific to the administration of sport and recreation including marketing, legal aspects, finance and economics. Application of information exchanged in this class is an integral component of this course. Pre-requisite: Junior Standing.

KIN-488 SPORT FACILITIES AND EVENT MANAGEMENT 3 Credits

Study and practice of how to construct and manage a sport facility. Students will learn the planning and implementation process of constructing a new sport facility. Students will also learn sport facility management skills including the basics of facility management, marketing and sales in relation to the sport facility, finance and budgeting, facility preparation, implanting a security plan, concession management, and box office management. Pre-requisite: Sophomore standing.

KIN-489 SPORT MARKETING AND ADVERTISING 3 Credits

This course is designed to connect the application of marketing principles to practice through an in-depth examination of theory, research, and current issues in the marketing of sport products, sporting events, sport facilities, sport teams, and sport programs. Students will explore the marketing mix as it relates to the consumer decision-making process through the development of an advertising campaign. Concepts covered include the marketing mix, types of sport consumers, event marketing concepts, advertising, social media and internet advertising methods. Pre-requisite: Junior class standing.

KIN-490 DIRECTED STUDY IN KINESIOLOGY 1-12 Credits**KIN-491 WORKSHOP IN KINESIOLOGY 1-12 Credits**

Workshops in Kinesiology, Physical Education, Athletics, Sports Medicine, and/or Health Promotion.

KIN-492 SPECIAL TOPICS IN KINESIOLOGY 1-12 Credits

Selected topics of current interest related to coaching, sport administration, fitness and wellness.

KIN-494 INTERNSHIP IN KINESIOLOGY 1-12 Credits

Application of advanced coursework, skills and knowledge to a supervised, practical experience in Kinesiology, Sports Administration, Coaching, Physical Education, Sports Medicine, Physical/Occupational Therapy, Fitness and Wellness. Pre-requisite: Instructor's permission.

KIN-495 PRACTICUM IN KINESIOLOGY 1-12 Credits**KIN-498 SENIOR RESEARCH PROJECT I 3 Credits**

Required of all Senior Kinesiology Majors. This course is designed to be followed by KIN 499 Senior Research/Project II. Students are introduced to basic research methods and current topics in their field of study. Students select a topic and prepare a detailed written review of the related literature and description of the study/project design. Pre-requisite: KIN-381 or any Statistics Course and completed 90+ credits.

KIN-499 SENIOR CAPSTONE 3 Credits

This course is intended to be the culminating educational experience in the Kinesiology, Exercise Science, Sport Management, and Sport Media degree programs. Students will integrate knowledge from all their coursework to demonstrate their subject matter expertise. Moreover, this course will serve as an assessment of the overall program learning outcomes. To demonstrate this expertise, students will explore ways to synthesize their knowledge in the context of their future profession. This occupational focus will serve as the foundation for the course. Students will identify essential competencies for their profession and create contemporary artifacts as evidence that they possess those competencies. Pre-requisite: KIN-498.

KIN-510 APPLIED SPORT PSYCHOLOGY 3 Credits

The primary goal of the course is to develop and enhance students' knowledge of concepts and techniques of performance psychology and their application to achieving important objectives in sport. The course and textbooks combine theory and research with the practical knowledge and methods of expert performance psychology consultants. Principles and practical applications are presented conjunctively throughout the course. Class time will be dedicated to understanding and applying the various aspects of sport psychology, including psychological skills training. Acceptance into Graduate Sport Coaching Certificate Program required.

KIN-520 COACHING COMPETITIVE ETHICS 3 Credits

The purpose of this course is to enable the student to understand and apply ethical values as a practitioner (coach) in the realm of competitive sport. Acceptance into Graduate Sport Coaching Certificate Program required.

KIN-563 APPLIED SPORT PHYSIOLOGY 3 Credits

The primary goal of this course is to provide students with an overview of important physiological concepts and their application to achieving important objectives in sport. Students will explore physiology topics in the neuromuscular, endocrine, metabolic, and cardiovascular systems. The practical application of these topics will be examined through principles of training including endurance, power, strength, and program development. Class time will be dedicated to understanding and applying the various aspects of sport physiology to enable students to competently train athletes in their future careers. Acceptance into Graduate Sport Coaching Certificate Program required.

KIN-594 SPORT COACHING INTERNSHIP 6 Credits

The purpose of this course is to engage in and enhance sport coaching skill and proficiency working with an age group and competitive level of your choice. Acceptance into Graduate Sport Coaching Certificate Program required.

MATH-015 ARITHMETIC AND PRE-ALGEBRA 3 Credits

This course emphasizes the concepts of order of operations, variables, simplifying algebraic expressions, and arithmetic with whole numbers, signed numbers, fractions, and decimals. Concrete representations of arithmetic operations and algebraic concepts are emphasized. This course is particularly appropriate for mathematically unprepared students who experience anxiety when learning mathematics and prepares students for MATH-025.

MATH-023 BASIC ALGEBRA FOR MATH AS A LIBERAL ART 3 Credits

Brief review of integer arithmetic, fraction arithmetic, percent and order of operations. Evaluating formulas. Units and unit analysis. Solving equations in one variable and using equations in one variable to solve application problems. Graphing linear equations, intercepts, slope, writing the equation of a line. Introduction to functions. Average rate of change, introduction to linear and exponential models. Simplifying exponential expressions, scientific notation, introduction to logarithms. Introduction to sets, counting methods, and discrete probability. Pre-requisite: A grade of C or better in Math-015 or satisfactory placement score. Course fee.

MATH-025 BASIC ALGEBRA 3 Credits

This course emphasizes the concepts of solving equations and inequalities in one variable, writing and graphing linear equations (including the concepts of slope and intercepts), exponent rules, factoring, and addition, subtraction, and multiplication of polynomials in one variable. Students engage in applications of many of these concepts including average rate of change and linear modeling. This course also includes introduction to the concepts of scientific notation, unit analysis, function, and systems of linear equations. Concrete representations, problem solving, reasoning, and critical thinking are emphasized. Pre-requisite: MATH-015 with a grade of 'C' or better, or satisfactory placement score.

MATH-040 ACCELERATED ARITHMETIC AND BASIC ALGEBRA 4 Credits

This course emphasizes the concepts of arithmetic, order of operations, variables, algebraic expressions, equations and inequalities in one variable, writing and graphing linear equations (including the concepts of slope and intercepts), exponent rules, factoring, and addition, subtraction, and multiplication of polynomials in one variable. Students engage in applications of many of these concepts including average rate of change and linear modeling. This course also includes introduction to the concepts of scientific notation, unit analysis, function, and systems of linear equations. Concrete representations, problem solving, reasoning, and critical thinking are emphasized. Due to the breadth of content in this course, hard work and dedication are required. This course prepares students for MATH-140.

MATH-123 MATH IN MODERN SOCIETY 3 Credits

This course introduces students to the form and function of mathematics as it applies to liberal arts studies with a heavy emphasis on its applications. Topics covered include descriptive statistics, inferential statistics, beginning probability, creating graphs, the concept of function, properties of linear equations, graphing linear equations, constructing and using linear models, exponential and logarithmic equations and models, and financial applications. Pre-requisite: MATH-025 or MATH-040 with a grade of 'C' or better, or satisfactory placement score, or placement into MATH-123P to be taken concurrently with MATH-123.

MATH-123P MATH IN MODERN SOCIETY--SUPPLEMENT 2 Credits

This course provides just-in-time preparation of the mathematical skills necessary to be successful in MATH-123 with an emphasis on problem-solving and college-readiness skills. Topics may include order of operations, fraction and decimal arithmetic, percent, scientific notation, interval notation, linear equations, calculator use, and mathematical modeling. Pre-requisite: MATH-015 with a grade of 'C' or better, or satisfactory placement score. Co-requisite: MATH-123.

MATH-130 FINITE MATHEMATICS 3 Credits

This course fulfills the skills component of the General Education core and is designed to provide students with a solid foundation in algebra and statistics which are currently pervasive in both business and society. This course is intended to demonstrate the application of algebra and statistics in various areas of business, industry, economics, and life and social sciences. Major topics include systems of linear equations and inequalities, elementary matrix algebra, introduction to linear programming, elementary discrete probability and statistics. Emphasis on applications to business, economics and social sciences. Pre-requisite: A grade of 'C' or better in MATH-025 or GNBPT-103 or satisfactory placement score.

MATH-137 ALGEBRA, TRIG AND STAT WITH APPLICATION 4 Credits

This course fulfills the skills component of the General Education Core. Cartesian coordinate system, representations of lines, functions of one or more independent variables, polynomial, radical, exponential, and logarithmic equations, radian and degree measure, right-angle trigonometry, law of sines and cosines, vectors in applied settings, probability theory, and statistics. The course will emphasize technical applications. Pre-requisite: A grade of 'C' or better in MATH-025, GNBPT-103, or satisfactory placement score.

MATH-140 ALGEBRAIC REASONING AND PROBLEM-SOLVING 3 Credits

This course builds on fundamental basic algebra concepts. This course emphasizes the concepts of function, domain, range, and zeros. This course also includes the study of linear, quadratic, logarithmic, exponential, radical, and rational expressions, equations, and functions. Students will learn to use critical thinking and problem-solving skills as they engage with applications of these concepts. Pre-requisite: MATH-025 or MATH-040 with a grade of 'C' or better, or satisfactory placement score.

MATH-140T Level D Math Placement Credits**MATH-143 PRECALCULUS I: ALGEBRA 3 Credits**

This course emphasizes the concept of real-valued functions and their applications, including domain, range, algebraic operations, composition, inverses, and graphing. Topics include polynomial functions, division of polynomials, roots of polynomials, theory of equations, complex numbers, the Fundamental Theorem of Algebra, rational functions and asymptotes, logarithmic and exponential functions, transformations, solving systems of linear and nonlinear equations, and matrices. Students will engage in multi-step algebraic manipulation of complicated functional expressions. Pre-requisite: MATH-140 or MATH-137 with a grade of 'C' or better, or satisfactory placement score.

MATH-144 PRECALCULUS II: TRIGONOMETRY 2 Credits

This course introduces right-triangle and circular function approaches to trigonometry. Topics include plane trigonometry, trigonometric identities, graphs of trigonometric functions, amplitude, frequency, phase shift, inverse trigonometric functions and their graphs, polar coordinates, and polar representation of complex numbers. Pre-requisite: MATH-143 with a grade of 'C' or better, or satisfactory placement score.

MATH-147 PRECALCULUS 5 Credits

The course emphasizes functions, circular trigonometry, and multilevel problem solving as preparation for calculus. Functions are treated as mathematical entities, including domain, range, algebraic operations, composition, inverses, and graphing. Polynomial, logarithmic, exponential, trigonometric, inverse trigonometric, radical, and rational functions are explored. Algebraic techniques include division of polynomials, roots of polynomials, theory of equations and inequalities, complex numbers and DeMoivre's Theorem, the Fundamental Theorem of Algebra, solving systems of linear and nonlinear equations, and matrices. Trigonometric identities are derived, proven, and applied. Polar coordinates, vectors, and oblique triangles are introduced and used in a variety of applications. Analytic geometry focuses on circles, parabolas, distance, and midpoints. MATH-147 is equivalent to MATH-143 plus MATH-144. Pre-requisite: MATH-140 or MATH-137 with a grade of 'C' or better, or satisfactory placement score.

MATH-153 STATISTICAL REASONING 3 Credits

This course introduces students to problem solving and decision making using single and multivariable statistical models. The course focuses on conceptual understanding of randomness, variability, statistical models, and inference through exploration of data. The use of technology for analysis of data is integrated throughout. Topics include descriptive statistics, probability, hypothesis testing, confidence intervals, likelihood ratios, correlation, and regression. Pre-requisite: MATH-025 or MATH-040 with a grade of 'C' or better, or satisfactory placement score, or placement into MATH-153P to be taken concurrently with MATH-153.

MATH-153P SUPPLEMENTAL INSTRUCTION FOR MATH 153 1 Credit

This course provides just-in-time preparation of the mathematical skills necessary to be successful in MATH-153 with an emphasis on problem-solving and college-readiness skills. Topics may include order of operations, fraction and decimal arithmetic, percent, scientific notation, interval notation, linear equations, calculator use, and use of statistical software. Pre-requisite: MATH-015 with a grade of 'C' or better, or satisfactory placement score. Co-requisite: MATH-153.

MATH-157 MATHEMATICS FOR ELEMENTARY TEACHERS I 4 Credits

This course provides an overview of some of the mathematics taught in grades K-8 with an emphasis on conceptual understanding and communication of mathematical principles. This is the first course in a two-course sequence of mathematics content courses which is not intended to be a methods of teaching course. Topics may include numbers and the base-ten system, fractions and problem-solving, ratio and proportional relationships, number theory, and addition, subtraction, multiplication, and division of real numbers. Pre-requisite: MATH-140 or MATH-137 with a grade of 'C' or better, or satisfactory placement score, or placement into MATH-157P to be taken concurrently with MATH-157.

MATH-157P SUPPLEMENTAL INSTRUCTION FOR MATH 157 1 Credit

This course provides just-in-time preparation of the mathematical skills necessary to be successful in MATH-157 and MATH-257 with an emphasis on problem-solving and college-readiness skills. Topics may include accuracy vs precision, order of operations, number theory, fraction and decimal arithmetic, percent, properties of real numbers, conversions and unit analysis, geometry and measurement, factoring, mental math, exponents and scientific notation, lines and graphing, probability, and statistics. Prerequisite: MATH-025 with a grade of 'C' or better, or satisfactory placement score. Co-requisite: MATH-157.

MATH-160 BRIEF CALCULUS 4 Credits

This course is a survey of the essentials of calculus, intended mainly for students in biology, social sciences, business, and liberal arts. Topics include an introduction to basic concepts and computational techniques for functions, derivatives, and integrals, with emphasis on polynomial, rational, exponential, and logarithmic functions. This course also includes a very brief introduction to calculus of functions of several variables. Pre-requisite: MATH-147 with a grade of 'C' or better, or MATH-143 with a grade of 'C' or better and MATH-144 with a grade of 'C' or better, or satisfactory placement score.

MATH-170 CALCULUS I 4 Credits

This course focuses on definitions of limit, derivative, antiderivative, and definite integral. Topics will include computation of the derivative, including logarithmic, exponential, and trigonometric functions. Applications of the derivative, optimization, the Mean Value Theorem, and the Fundamental Theorem of Calculus are also included in this course along with a brief introduction to applications of the integral and to computation of antiderivatives. This course is intended for students in mathematics, computer science, engineering, and the sciences. Pre-requisites: MATH-147 with a grade of 'C' or better or MATH-143 with a grade of 'C' or better and MATH-144 with a grade of 'C' or better, or satisfactory placement score.

MATH-175 CALCULUS II 4 Credits

This course focuses on applications of the integral, symbolic and numerical techniques of integration, and inverse transcendental functions. This course also includes sequences and series, with an emphasis on power series and approximation. Pre-requisite: MATH-170 with a grade of 'C' or better.

MATH-186 DISCRETE MATHEMATICS 3 Credits

This course consists of numerous topics which are particularly valuable to students pursuing a computer science degree. Topics may include sets, functions, algorithms, logic, and Boolean algebra. Pre-requisite: MATH-143 or MATH-147 with a grade of 'C' or better, or satisfactory placement score.

MATH-190 DIRECTED STUDY IN MATH 1-12 Credits**MATH-192 SPECIAL TOPICS IN MATHEMATICS 1-12 Credits****MATH-195 PRACTICUM IN MATHEMATICS 1-2 Credits**

Tutoring in the mathematics laboratory or functioning as a teacher's aide in a lower division mathematics course. Pre-requisite: Approval of the division chair. May be repeated for a total of 4 credits.

MATH-253 STATISTICAL METHODS FOR THE SCIENCES 3 Credits

Introduction to statistical methods for scientists. Includes design of statistical studies, basic sampling methods, descriptive statistics, probability and sampling distributions, inference regression, and analysis of variance. Also includes an introduction to software packages used in Statistics. Pre-requisite: A grade of 'C' or better in MATH-143 or MATH-147 or satisfactory placement score.

MATH-254 STATISTICAL METHODS 4 Credits

This course emphasizes a precalculus treatment of descriptive statistics, sampling methods, inference, confidence intervals, hypothesis testing, simple linear regression, correlation, and introduction to probability. Students will learn to reason, problem-solve, communicate their ideas, and apply those statistical methods to a wide variety of disciplines. Students will learn to conduct analyses using statistical software commonly used in industry. Pre-requisite: MATH-143 or MATH-147 with a grade of 'C' or better, or satisfactory placement score.

MATH-257 MATHEMATICS FOR ELEMENTARY TEACHERS II 4 Credits

This course is a continuation of MATH-157 and continues an overview of some of the mathematics taught in grades K-8 with an emphasis on conceptual understanding and communication of mathematical principles. This is the second course in a two-course sequence of mathematics content courses which is not intended to be a methods of instruction course. Topics may include algebra, geometry, measurement, area of shapes, circumference, the number pi, construction proofs of the Pythagorean theorem, solid shapes and their volumes and surface areas, geometry of motion and change, statistics, and probability. Pre-requisite: MATH-157 with a grade of 'C' or better.

MATH-267 MATHEMATICS FOR MIDDLE SCHOOL TEACHERS 4 Credits

This course is designed to prepare middle school mathematics teachers. The course provides an overview of some of the mathematics taught in grades 6-10 with an emphasis on conceptual understanding and communication of mathematical principles through reasoning and problem-solving. Topics will include transformational geometry, counting and probability, and statistics. Additional topics may include set theory, graph theory, number theory, coding, intuitive calculus, introduction to linear algebra, basic topology, and discrete mathematics. Pre-requisite: MATH-143 or MATH-147 with a grade of 'C' or better.

MATH-275 CALCULUS III 4 Credits

This course emphasizes vector algebra and geometry, functions of several variables, partial and directional derivatives, gradient, chain rule, optimization, and multiple and iterated integrals. Topics also include parametric curves and surfaces in 3-space, vector fields, divergence and curl, and line and surface integrals. Additional topics may include Green's Theorem, Stokes' Theorem, and divergence theorems. Pre-requisite: MATH-175 with a grade of 'C' or better.

MATH-285 EUCLIDEAN GEOMETRY 3 Credits

This course is designed to prepare teachers of middle and high school geometry. The course emphasizes classic geometric proof and application of geometric theorems. Topics include parallel lines, triangles, quadrilaterals, circles, and polygons. Pre-requisite: MATH-143 or MATH-157 or MATH-186 with a grade of 'C' or better, or satisfactory placement score.

MATH-290 DIRECTED STUDY IN MATHEMATICS 1-3 Credits

Pre-requisite: MATH-170 with a grade of 'C' or better, or permission of the division.

MATH-291 WORKSHOP IN MATHEMATICS 1-3 Credits**MATH-292 SPECIAL TOPICS IN MATHEMATICS 1-3 Credits****MATH-295 PRACTICUM IN MATHEMATICS 1-2 Credits**

Tutoring in the mathematics laboratory or functioning as a teacher's aide in a lower division mathematics course. Pre-requisite: Approval of the division chair. May be repeated for a total of 4 credits.

MATH-299 RESEARCH ASSISTANTSHIP 1-12 Credits**MATH-300 INTRODUCTION TO MATHEMATICAL REASONING 3 Credits**

This course focuses on introductory topics in mathematics including logic, set theory, properties of the real line, number theory, induction, mappings, rigorous treatment of limits of sequences. This course emphasizes the concepts of theorem and proof. Pre-requisite: MATH-175 with a grade of 'C' or better.

MATH-313 NUMBER THEORY 3 Credits

This course focuses on modular arithmetic, Pythagorean triples, prime numbers, quadratic reciprocity, Diophantine approximation, elliptic curves, and public key encryption systems. Pre-requisite: MATH-175 with a grade of 'C' or better.

MATH-320 PROBABILITY AND STATISTICS 3 Credits

This course emphasizes probability theory, sample spaces, random variables, distributions, conditional probability, central limit theorems, stochastic processes, estimation, and testing of hypotheses. Pre-requisites: MATH-175 with a grade of 'C' or better and MATH-254 with a grade of 'C' or better.

MATH-340 LINEAR ALGEBRA 3 Credits

This course emphasizes systems of linear equations, vector spaces, linear independence, basis, dimension, inner products, transformation, injectivity and surjectivity, orthogonal projections, orthonormal bases, eigenvalues, eigenvectors, and positive definite matrices. Pre-requisite: MATH-175 or CS-211 with a grade of 'C' or better.

MATH-345 ORDINARY DIFFERENTIAL EQUATIONS 3 Credits

This course emphasizes separation of variables, variations of parameters, methods of characteristic roots, undetermined coefficients, systems of differential equations, Laplace transform, and power series. Pre-requisite: MATH-175 with a grade of 'C' or better.

MATH-367 MATHEMATICS FOR MIDDLE/SECONDARY SCHOOL TEACHERS 4 Credits

This course is designed to prepare teachers of middle and secondary school mathematics. The course provides an overview of some of the mathematics taught in grades 6-12 with an emphasis on conceptual understanding and communication of mathematical principles through reasoning and problem-solving. Topics will include transformational geometry, counting and probability, and statistics. Additional topics may include set theory, graph theory, number theory, coding, intuitive calculus, introduction to linear algebra, basic topology, and discrete mathematics. Pre-requisite: MATH-143 or MATH-147 with a grade of 'C' or better.

MATH-386 MODERN GEOMETRY 3 Credits

This course focuses on postulates of Euclid and Hilbert, transformational geometry, and topics from projective and affine geometry. Understanding of the foundations of high school geometry is emphasized. Pre-requisite: MATH-170 with a grade of 'C' or better.

MATH-390 DIRECTED STUDY IN MATHEMATICS 1-3 Credits**MATH-391 WORKSHOP IN MATHEMATICS 1-3 Credits****MATH-392 SPECIAL TOPICS IN MATHEMATICS 1-12 Credits****MATH-395 PRACTICUM IN MATHEMATICS 1-2 Credits****MATH-399 RESEARCH ASSISTANTSHIP 1-12 Credits****MATH-450 COMPLEX ANALYSIS 3 Credits**

This course emphasizes complex numbers and functions, complex derivatives and integrals, residue theory, conformal mappings, and uniform convergence. Pre-requisite: MATH-300 with a grade of 'C' or better.

MATH-460 ABSTRACT ALGEBRA I 3 Credits

This is the first course in a two-course sequence that provides an introduction to abstract algebra. Topics include groups, subgroups, permutation groups, isomorphisms, homomorphisms, quotient groups, and the Fundamental Theorem of Finite Abelian Groups. Pre-requisite: MATH-300 with a grade of 'C' or better.

MATH-461 ABSTRACT ALGEBRA II 3 Credits

This is the second course in a two-course sequence that provides an introduction to abstract algebra. Topics include rings, subrings, ideals, quotient rings, polynomial rings, vector spaces, fields, extension fields, and Galois theory. Pre-requisite: MATH-460 with a grade of 'C' or better.

MATH-470 GENERAL TOPOLOGY 3 Credits

This course provides an introduction to the fundamental concepts of general topology including set theory, metrics, neighborhoods, bases, subspaces, mappings, continuity, separation axioms, compactness, and connectedness. Pre-requisite: MATH-300 with a grade of 'C' or better.

MATH-480 REAL ANALYSIS I 3 Credits

This course is the first course in a two-course sequence that provides a theory of the real line, properties of real numbers, and real-valued functions. Topics include convergence of sequences, open and closed sets, density of sets, Cauchy sequences, the Monotone Convergence Theorem, pointwise and uniform convergence of functions; continuity, the Mean Value Theorem, the Intermediate Value Theorem, compactness, and differentiability. Pre-requisite: MATH-300 with a grade of 'C' or better.

MATH-481 REAL ANALYSIS II 3 Credits

This course is the second course in a two-course sequence on the theory of real-valued functions. Topics include sequences and series of functions, Weierstrass M-test, power series, Taylor series, Riemann integrability, metric spaces, convergence in metric spaces, and differentiability of functions with higher dimensional domains. Pre-requisite: MATH-480 with a grade of 'C' or better.

MATH-490 DIRECTED STUDY IN MATHEMATICS 1-3 Credits

Pre-requisite: A grade of 'C' or better in MATH-170 or permission of the division.

MATH-491 WORKSHOP IN MATHEMATICS 1-3 Credits**MATH-492 SPECIAL TOPICS IN MATHEMATICS 1-3 Credits****MATH-494 INTERNSHIP IN MATHEMATICS 1-12 Credits**

Internship in Math.

MATH-495 PRACTICUM IN MATHEMATICS 1-2 Credits

Tutoring in the mathematics laboratory or functioning as a teacher's aide in a lower division mathematics course. Pre-requisite: Approval of the division chair. May be repeated for a total of 4 credits.

MATH-499 RESEARCH PROJECT AND SEMINAR IN MATH 1-3 Credits

Students will conduct and communicate the results of a research project in the Teacher Education and Mathematics Division. Topics may include the historical, philosophical, cultural, and environmental aspects, and the processes of mathematics. Requirements of students include satisfactory oral presentation and defense of their research and submission of a written report approved by their advisor to the Teacher Education and Mathematics Division. Prerequisite: NS-398.

NS-100 INTRODUCTION TO ENVIRONMENTAL SCIENCE 4 Credits

An introductory course for non-science majors. This course will cover the vast interdisciplinary subject of environmental science, which uses ecological principles to address a broad range of topics from conservation of single species to global issues such as global warming and climate change. These issues involve a complex array of information and applications from Ecology, environmental policy, politics, Geology, and Geography. Three hours of lecture and one 3-hour laboratory period per week. Pre-requisite: MATH-015 or satisfactory math placement.

NS-140 INTEGRATED SCIENCE I 4 Credits

This team-taught, place-based, course is designed to provide an introduction to multiple scientific disciplines, including biology, chemistry, computer science, earth science, mathematics, and physics around the theme of the greater Lewiston-Clarkston valley watershed. Course content is integrated in order to allow the students the opportunity to use multiple scientific disciplines to understand the world in which they live. Weekly laboratories will be used to provide students with hands-on learning experiences that directly related to the topics covered in lecture and may include field experiences. The course will include emphases on college reading, college writing, collaboration, and using math to solve real-world problems. This is a 4-credit class with 3 hours of lecture a week and approximately 3 hours of laboratory each week. Pre-requisite: Placement into MATH-143P or equivalent or permission of the instructor. Must be concurrently enrolled into MATH-143 or permission of instructor.

NS-150 INTRODUCTION TO NATURAL SCIENCES 3 Credits

An introduction to science as a way of knowing. Examples are chosen from astronomy, genetics, genetic engineering, evolution and other timely topics. Pre-requisite: ENGL-101.

NS-171 INTEGRATED SCIENCE I 3 Credits

First of a two-semester sequence designed for the LCSC pre-service teachers to teach science in the elementary grades. NS-171 provides a college-level understanding of the scientific knowledge base for the physical sciences taught in grades K-8 in most states. Pre-requisite: A grade of 'C' or better in MATH-137 or satisfactory math placement.

NS-172 INTEGRATED SCIENCE II 3 Credits

Second of a two-semester sequence. NS-172 provides a college-level understanding of the scientific knowledge base for the life and earth sciences taught in grades K-8 in most states. Pre-requisite: A grade of 'C' or better in NS-171.

NS-173 INTEGRATED SCIENCE I RECITATION 1 Credit

Students will have the opportunity to practice solving problems relating to fundamental physical scientific concepts in order to prepare themselves to teach science in the elementary grades with competence. The opportunity to become more familiar with scientific terminology will also be given.

NS-174 NATURAL SCIENCE FOR ELEMENTARY EDUCATOR 4 Credits

This course is an introduction to biology and earth science for future elementary educators. To this end, we will cover the natural science topics specified by the Idaho State Standards for grade K through 8. These include cells, genetics, human biology, planets, weather, and basic geology, as well as science methodology. Throughout the semester, we will also explore ways of learning that foster deep learning, conceptual understanding, curiosity, and confidence.

NS-190 DIRECTED STUDY IN NATURAL SCIENCE 1-12 Credits**NS-192 SPECIAL TOPICS IN NATURAL SCIENCE 1-12 Credits****NS-265 SCIENCE SUCCESS SEMINAR 1 Credit**

In this course, students will explore their motivation and meaning, learn strategies to study effectively in science, and develop a network to support their success. Students at all levels are welcome.

NS-270 SCIENCE OUTREACH 1 Credit

A course where students will learn about and participate in science outreach, involving visits to local elementary and secondary schools as well as those conducted on the LCSC campus. Students will assist others (both faculty and students in NS 470) in the presentation of outreach programs and will gain valuable skills in both outreach preparation and interpersonal communication.

NS-275 FIELD EXPERIENCES IN SCIENCE 2 Credits

A field-based experience integrating a variety of disciplines including, but not limited to, field biology, earth science, environmental chemistry, astronomy, and cultural history. No pre-requisites required.

NS-290 DIRECTED STUDY IN NATURAL SCIENCE 1-12 Credits**NS-291 WORKSHOP IN NATURAL SCIENCE 1-12 Credits****NS-292 SPECIAL TOPICS IN NATURAL SCIENCE 1-12 Credits****NS-295 PRACTICUM IN NATURAL SCIENCE 1-12 Credits****NS-299 RESEARCH ASSISTANTSHIP 1-12 Credits****NS-380 SENIOR SEMINAR 1 Credit**

Reading and research involving primary literature in the student's field of study. Topic-driven research will result in written and oral presentations.

NS-390 DIRECTED STUDY IN NATURAL SCIENCE 1-12 Credits**NS-395 PRACTICUM IN NATURAL SCIENCE 1-12 Credits****NS-398 SENIOR PROJECT PROPOSAL 2 Credits**

Preparation of the proposal for Senior Research projects to be completed in NS 499. Students will become familiar with the procedure by which proposals are prepared and submitted to funding agencies like the National Science Foundation (NSF). The format of the proposal is based on NSF proposal requests. The course will ensure that the research projects are well conceived, carefully planned, and have a reasonable chance of succeeding. All senior-research proposals are reviewed by a board of Natural Science faculty members. Proposals may be accepted, accepted with revisions, or returned for major revisions with a request for resubmission during the next semester's review. Pre-requisite: Junior standing.

NS-399 RESEARCH ASSISTANTSHIP 1-3 Credits**NS-465 TUTORING IN NATURAL SCIENCE 3 Credits**

In this course, students will learn various tutoring skills accepted by the National Tutoring Association (NTA) as they work toward earning Basic Level Tutor Certification through the NTA. Students will learn to tutor and improve their tutoring through practice and working directly with tutees. Students will develop essential job skills, such as communication, teamwork, critical thinking, problem-solving, creativity, organization, and accountability.

NS-470 SCIENCE OUTREACH 1 Credit

A course where students will learn about and participate in science outreach, involving visits to local elementary and secondary schools as well as those conducted on the LCSC campus. Students will also be responsible for designing and implementing the program in the classroom setting, and will participate in peer assessment of other students' presentations, gaining valuable skills in outreach preparation and both interpersonal and large group communication. Pre-requisites: A grade of 'C' or higher in BIOL-181 or CHEM-112 & NS-270.

NS-475 FIELD EXPERIENCE 2 Credits

A field-based experience integrating a variety of disciplines including, but not limited to, field biology, earth science, environmental chemistry, astronomy, and cultural history. Requires written and/or oral presentations as a part of the field experience. No pre-requisites required.

NS-490 DIRECTED STUDY IN NATURAL SCIENCE 1-12 Credits**NS-491 WORKSHOP IN NATURAL SCIENCE 1-12 Credits****NS-492 SPECIAL TOPICS IN NATURAL SCIENCE 1-12 Credits****NS-494 INTERNSHIP IN NATURAL SCIENCE 1-12 Credits****NS-495 PRACTICUM IN NATURAL SCIENCE 1-12 Credits****NS-499 RESEARCH PROJECT AND SEMINAR IN NATURAL SCIENCE 1-3 Credits**

Students will conduct and communicate the results of a research project in the Natural Sciences Division. Topics may include the historical, philosophical, cultural and environmental aspects, and the processes of natural science. Requirements of students include satisfactory oral presentation and defense of their research and submission of a written report approved by their advisor to the Natural Sciences Division. Pre-requisite: NS-398.

PHYS-108 GENERAL PHYSICS WITH RADIATION 4 Credits

Classical mechanics, electricity and magnetism, circuits, atomic structure, radiation health physics, and X-ray production. This course introduces topics in physics essential to the field of radiation science and technology. There are three hours of lecture and one 2-hour laboratory per week. Emphasis will be placed on problem-solving. Pre-requisites: MATH-137, MATH-143 and MATH-144, or MATH-147.

PHYS-111 GENERAL PHYSICS I 4 Credits

Mechanics, heat and thermodynamics. General Physics I is a study of the fundamental principles of classical physics. An emphasis is placed upon analytic problem solving using algebra and elementary trigonometry, and laboratory skills. There are three hours of lecture and one 3-hour laboratory per week. Pre-requisite: A grade of 'C' or better in MATH-144 or MATH-147 or satisfactory math placement.

PHYS-112 GENERAL PHYSICS II 4 Credits

Electricity and magnetism, optics, modern physics. General Physics II is the sequel to General Physics I. Course covers the fundamental principles of electricity, magnetism, and light. There are three hours of lecture and one 3-hour laboratory per week. Pre-requisite: A grade of 'C' or better in PHYS-111.

PHYS-171 PHYS SCIENCES FOR ELEMENTARY EDUCATORS 4 Credits

This course is an introduction to chemistry and physics for future elementary educators. To this end, we will cover the physical science topics specified by Idaho State Standards for grades K through 8. These include measurement, forces, energy, electricity and mixtures and solutions, and science methodology. Throughout the semester, we will also explore ways of teaching that foster deep learning, conceptual understanding, curiosity and confidence-building. Pre-requisite: Level C or higher: Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

PHYS-190 DIRECTED STUDY IN PHYSICS 1-12 Credits**PHYS-192 SPECIAL TOPICS IN PHYSICS 1-12 Credits****PHYS-205 DESCRIPTIVE ASTRONOMY 4 Credits**

A survey of descriptive astronomy. Topics: historical development of theories of the universe, physical organization of the solar system/universe; the formation and evolution of stars, galaxies, recently discovered astronomical objects such as quasistellar objects and black holes; evolution of the universe. Three hours of lecture and one 3-hour laboratory per week. Pre-requisite: Level C or higher: Core math ready (excluding 153P and 123P) or core math complete. See Course Placement Chart for equivalent courses and test scores.

PHYS-211 PHYSICS FOR SCIENTISTS AND ENGINEERS I 5 Credits

Mechanics, heat and thermodynamics. Engineering Physics I is the standard, calculus based university physics course. Fundamental principles of physics are examined using analytic problem-solving and laboratory exploration. There are four hours of lecture and one 3-hour laboratory per week. Requisite: MATH-170 must be taken either as a prerequisite or concurrently.

PHYS-212 PHYSICS FOR SCIENTISTS AND ENGINEERS II 5 Credits

Electricity and magnetism, optics, modern physics. Engineering Physics II is the sequel to Engineering Physics I. Principles of electrodynamics theory, elements of optics, and modern physics are examined using analytic problem solving and laboratory exploration. There are four hours of lecture and one, three-hour laboratory per week. Pre-requisite PHYS-211 with a grade of C or better.

PHYS-290 DIRECTED STUDY IN PHYSICS 1-4 Credits**PHYS-291 WORKSHOP IN PHYSICS 1-4 Credits****PHYS-292 SPECIAL TOPICS IN PHYSICS 1-12 Credits****PHYS-293 SERVICE LEARNING 1-12 Credits****PHYS-295 PRACTICUM IN PHYSICS 1-12 Credits****PHYS-299 RESEARCH ASSISTANTSHIP 1-12 Credits****PHYS-305 AN INTRODUCTION TO MODERN PHYSICS 3 Credits**

An introduction to the non-classical physics of the 20th century. Selected topics include the historical development that lead to modern physics, the transitional Bohr model, descriptive elements of quantum mechanics, special relativity, nuclear physics, and elementary particles. Three hours of lecture per week. Pre-requisite: A grade of 'C' or better in PHYS-111 or PHYS-211.

PHYS-390 DIRECTED STUDY IN PHYSICS 1-4 Credits**PHYS-395 PRACTICUM IN PHYSICS 1-12 Credits****PHYS-399 RESEARCH ASSISTANTSHIP 1-12 Credits****PHYS-490 DIRECTED STUDY IN PHYSICS 1-4 Credits****PHYS-491 WORKSHOP IN PHYSICS 1-4 Credits****PHYS-492 SPECIAL TOPICS IN PHYSICS 1-12 Credits****PHYS-495 PRACTICUM IN PHYSICS 1-12 Credits****RC-227 RECREATIONAL ARTS AND CRAFTS 3 Credits**

Designed to meet the needs of the prospective recreational leader and all individuals who work with young people in developing a wide range of art and craft skills. Emphasis is on performance.

RC-239 RECREATIONAL LEADERSHIP 3 Credits

The development of leadership qualities and techniques in a wide variety of recreational activities within a framework of a recreation or physical education program.

RC-285 CAMP COUNSELING 3 Credits

Understanding campers, camp programs and staff responsibilities. Examination of philosophies of private, organizational and school camps. Prepares students for employment in summer camping positions. Appropriate for all individuals involved in working with groups of all age levels. Camping trips will be required.

RC-290 DIRECTED STUDY IN RECREATION 1-6 Credits

RC-291 WORKSHOP IN RECREATION 1-6 Credits

RC-292 SPECIAL TOPICS IN RECREATION 1-3 Credits

RC-295 PRACTICUM IN RECREATION 1-12 Credits

RC-299 RESEARCH ASSISTANTSHIP 1-12 Credits

Graded P/F only.

RC-387 LEISURE PROGRAMS 1-3 Credits

The development, promotion, organization and administration of leisure activities. Practical experience in a leisure program in Recreation 1-3 credits
Supervised experience in public and/or private recreational programs, 295/495. Pre-requisite: Permission of the instructor.

RC-472 OUTDOOR EDUCATION 3 Credits

Study and practice of outdoor leadership skills, expedition planning, environmental ethics. Students will learn a variety of outdoor skills including backpacking, cross-country skiing, fly and bait casting, orienteering rock climbing and biking. Field trips will be required. Cross-listed with KIN-472.

RC-490 DIRECTED STUDY IN RECREATION 1-12 Credits

RC-491 WORKSHOP IN RECREATION 1-12 Credits

RC-492 SPECIAL TOPICS IN RECREATION 1-3 Credits

RC-494 INTERNSHIP IN RECREATION 1-12 Credits

Application of advanced coursework, skills and knowledge to a supervised, practical experience in Kinesiology, Sports Administration, Coaching, Physical Education, Sports Medicine, Physical/Occupational Therapy, Fitness and Wellness. Pre-requisite: Instructor's permission.

RC-495 PRACTICUM IN RECREATION 1-12 Credits