SP M 190. Introduction to Athletic Training
3 Credits
Introduction to the principles of athletic training.

SP M 191. Medical Terminology
3 Credits
Study of the structure of medical language with emphasis on sports medicine-related terminology. Restricted to Las Cruces campus only.

SP M 200. CAREER PREPARATION
1 Credit
From concept to implementation: Career exploration, setting up degree plans, finding graduate programs, developing professional resumes, writing letters of application, seeking letters of recommendation, and interview preparation. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

SP M 223. Exploring Extreme Human Performance
3 Credits
A reading, writing and documentary based course studying human’s quest and the related sacrifices associated with participating in extreme performance activities such as the Olympics, wakeboarding, snowboarding, military special forces, ultra-run events, marathons, etc. Consent of Instructor required. Restricted to Las Cruces campus only.

SP M 250. Emergency Response in Sports Medicine
2 Credits
Designed to provide knowledge and experience in emergency care procedures, blood borne pathogens, and first aid. Students will receive certification in CPR/AED for the Professional Rescuer and in First Aid, upon successful completion of course. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Consent of Instructor.

SP M 271. Anatomy & Physiology I
3 Credits
Detailed study of the structure and function of the human musculoskeletal, cardiovascular, respiratory, and peripheral nervous systems. Designed specifically for students interested in allied health professions. Restricted to Las Cruces campus only.

SP M 271 L. Anatomy and Physiology Laboratory
1 Credit
Compliment to SP M 271. Students will engage in activities designed to enhance appreciation of the anatomical structures related to the content areas for SP M 271. Restricted to Las Cruces campus only.

SP M 272. Clinical Practicum I
2 Credits
Introduction to the clinical aspects of the athletic training education program. Must maintain at least 3.0 GPA. May be repeated up to 4 credits. Consent of Instructor required. Restricted to: SP M majors. Restricted to Las Cruces campus only.

SP M 273. Clinical Practicum II
3 Credits
Athletic training psycho-motor skills are enhanced and assessed by a preceptor during clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: SP M majors. Restricted to Las Cruces campus only.

SP M 275 L. A & P LAB PE/DANCE
1 Credit
Practical laboratory involving the kinematic and kinesthetic aspects of Human Anatomy and Physiology as it applied to Physical Education and Dance. Restricted to: Physical Education and Dance. Not acceptable for Kinesiology Majors majors. Restricted to Las Cruces campus only.

Prerequisite(s): SP M 271.

SP M 290. General Medical Conditions
3 Credits
Study of the recognition, evaluation, management, and treatment of non-orthopedic medical conditions that affect the physically active population. Consent of Instructor required. Restricted to: SP M and Kinesiology Majors majors. Restricted to Las Cruces campus only.

Prerequisite(s): SP M 190, 191 and 271/271L.

SP M 303. Health and Exercise Psychology
3 Credits
The course examines the reciprocal relationship among physical activity, exercise behavior, and psychological determinants associated with adopting and maintaining an exercise program. Topics include theories of behavioral change, exercise psychology interventions, the benefits/ pitfalls of exercise, and psychological factors influencing patient rehabilitation.

Prerequisite(s): GPA of 2.75.

SP M 304. Psychology of Sport
3 Credits
Development of coaching techniques to enhance sport performance based on understanding and use of psychological principles.

Prerequisite(s): GPA of 2.75.

SP M 305. Applied Biomechanics
3 Credits
The application of anatomical, mechanical and electrical concepts to better understand the fundamental nature of human movement.

Prerequisite(s): SP M 271 GPA of 2.75.

SP M 305 L. Applied Biomechanics Laboratory
1 Credit
This course serves to provide an introduction to human movement and its analysis. The conceptual framework of the course will allow for the application of anatomical, mechanical, and electrical concepts in order to better understand the fundamental nature of movement.

Prerequisite(s): SP M 271; GPA 2.75.

SP M 307. Pathophysiology and Human Function(s)
3 Credits
Students will discuss basic concepts of pathophysiology such as inflammation & repair, infectious diseases, neoplasms, and diseases of specific physiological systems. In addition, students will discuss a variety of case studies, and in so doing will be able to relate pathophysiologic conditions to symptoms, activity restrictions and disability.

Prerequisite(s): SP M 271; SP M 271L; SP M 308, GPA 2.75.
SP M 308. Exercise Physiology
3 Credits (2+2P)
Basic physiological principles as they apply to exercise and fitness programs. Laboratory experiences included. GPA of 2.75.
Prerequisite(s): SP M 271 or PE P 208.

SP M 309. Neurophysiology and Human Function
3 Credits
Students will discuss neurological control of human movement. Topics will include central and peripheral nervous system functions, with particular emphasis given to somatosensory afferent and motor efferent control. In addition, students will develop an understanding of the techniques employed to assess neurologic function in various patient populations.
Prerequisite(s): SP M 271; SP M 271L; SP M 308; and GPA of 2.75.

SP M 310. Orthopedic Examination, Evaluation and Diagnosis of Lower Extremity Injuries
4 Credits
Examines normal human anatomy, mechanisms of athletic injury, and deviation from normal anatomy following athletic injury to the lower extremity. Must maintain at least 3.0 GPA. Consent of Instructor required. Restricted to: SP M and KINES majors.

SP M 319. Lifetime Activities
2 Credits
Knowledge and skills with weight training, cardiovascular exercise, Tai Chi, Pilates, and other lifetime activities related to the promotion of health/fitness through a lifespan.

SP M 320 L. Palpation and Anatomical Kinesiology Laboratory
2 Credits
Practical hands-on clinical laboratory introducing techniques necessary for physiological and functional kinematic evaluation of human function. May be repeated up to 2 credits.
Prerequisite(s): SP M 271, SP M 271L, GPA 2.75.

SP M 324. Introduction to Exercise Science: Exercise Physiology and Biomechanics
3 Credits
This course serves to provide a broad introduction to both the physiology of exercise and the mechanics of human movement. The conceptual framework of the course will allow for the development of a broad knowledge base regarding these concepts and the latter portions of the course will focus on real-world application of the concepts. Consent of Instructor required.
Prerequisite(s): SP M 271 Anatomy and Physiology I.

SP M 330. Exercise Testing and Prescription
4 Credits
This combined lecture and lab class introduces students to the scientific basis for and principles of exercise testing and prescription. The focus is on basic approaches to exercise testing and prescription for healthy adults, while application to some special populations with chronic disease will be discussed. GPA of 2.75.
Prerequisite(s): SP M 271 and SP M 308 or consent of instructor.

SP M 341. Motor Development
3 Credits
Covers development of motor skills from infancy through maturity. Focus on the principles of motor development, early motor behavior, stage theory, and assessment. Field experiences will augment lecture and readings. May be repeated up to 3 credits. Consent of Instructor required.

SP M 342. Motor Learning
3 Credits
An examination of the theoretical foundations and related literature that underlie the learning, performing, and retention of motor skills with implications for effective teaching and coaching. May be repeated up to 3 credits.
Prerequisite(s): GPA of 2.5.

SP M 371. Anatomy and Physiology II
3 Credits
Detailed study of the structure and function of the human endocrine, immune, digestive, reproductive, integumentary, central nervous and renal systems. Designed specifically for students interested in allied health professions. GPA of 2.75.
Prerequisite(s): SP M 271G or consent of instructor.

SP M 371 L. Anatomy and Physiology II Lab
1 Credit
The students will develop skills in palpating various bony landmarks as well as origins and insertions of major soft tissues. In addition, problem based learning scenarios will be used to complement the SP M 371 lecture material and thereby further students understanding of certain physiologic systems including neural, digestive, reproductive, endocrine, and integumentary.
Prerequisite(s): SP M 271; SPM 271 L; GPA 2.75.

SP M 372. Clinical Practicum III
3 Credits
Athletic training psychomotor skills are enhanced and assessed by a preceptor during clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: SP M and KINES majors.

SP M 373. Clinical Practicum IV
3 Credits
Athletic training psychomotor skills are enhanced and assessed by a preceptor during clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: SP M majors.

SP M 375. Therapeutic Modalities
4 Credits
The physiological effects, indications, contraindication, dosage, and maintenance of therapeutic modalities related to the treatment of athletic or activity-related injuries. May be repeated up to 4 credits. Consent of Instructor required. Must maintain 2.75 GPA. Restricted to: SP M, KIN majors.
Prerequisite(s): Consent of Instructor, SP M 271.

SP M 409. Clinical Biomechanics
3 Credits
The application of biomechanical analysis of human movement as it relates to clinical proficiencies through the use of anatomical, mechanical and electrical concepts.
Prerequisite(s): SPM 271, GPA 3.0.
Corequisite(s): SP M 409 L.

SP M 409 L. Clinical Biomechanics Laboratory
1 Credit
Laboratory experiments and biomechanical analysis of human movement as they relate to clinical proficiencies through the use of anatomical, mechanical and electrical concepts.
Prerequisite(s): SP M 271, SP M 409, GPA 3.0.
Corequisite(s): SP M 409.
SP M 410. Orthopedic Examination, Evaluation and Diagnosis of Upper Extremity Injuries
4 Credits
Examines normal human anatomy, mechanisms of athletic injury, and deviation from normal anatomy following athletic injury to the upper extremity. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: SP M and KINES majors.

SP M 411. Pharmacology in Athletic Training
2 Credits
An introduction to general medical conditions and pharmacological applications in the athletic training setting. Emphasis on the laws governing the development and distribution, indications, contraindications, precautions, and interactions of prescription and over-the-counter medications. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: SP M and KINES majors.

SP M 412. Inferential Statistics in Sport and Exercise Science
3 Credits
Statistical concepts and methods basic to experiential research to include normal distribution, z-tests, t-tests, analysis of variance and regression analysis. An understanding of sport and exercise science theory is required for students enrolling in this course Restricted to: KIN,SP M majors. Prerequisite(s): GPA of 2.75; or consent of instructor.

SP M 413. Statistical Application in Sports and Exercise Science
3 Credits
An introduction to descriptive statistics and the interpretation of data in the solution of problems in sport and exercise related research. GPA 2.75. Prerequisite(s): Junior or senior standing.

SP M 415. Therapeutic Exercise
3 Credits
The physiological effects, indications, contraindications, dosage, and maintenance of therapeutic modalities related to the treatment of athletic or activity-related injuries. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: SP M and KINES majors.

SP M 420. Orthopedic Examination, Evaluation and Diagnosis of Core, Spine and Head Injuries
3 Credits
Advanced clinical assessment techniques and applications. Must maintain at least a 3.0 GPA. Consent of Instructor required. Restricted to: SP M majors.

SP M 422. Clinical Practicum V
3 Credits
Athletic training psychomotor skills are enhanced and assessed by a preceptor during clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: ATEP,SP M majors.

SP M 423. Clinical Practicum VI
3 Credits
Athletic training psycho-motor skills are enhanced and assessed by a preceptor during clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses. Students might complete a general medical rotation with this course Consent of Instructor required. Restricted to: SP M majors.

SP M 424. Clinical Practicum VII
3 Credits
Athletic training psychomotor skills are enhanced and assessed by a preceptor during clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses. Students might complete a general medical rotation with this course. Must maintain 2.8 GPA. Consent of Instructor required. Restricted to: ATEP,SP M majors.

SP M 425. Organization and Administration in Athletic Training
3 Credits
An introduction to management, leadership, financial strategies, professional development and legal issues related to the athletic training setting. Must maintain 3.0 GPA. Consent of Instructor required. Restricted to: SP M majors.

SP M 445. Internship
6,12 Credits (6,12P)
A full-time internship in an approved wellness, fitness, athletic or recreation program with experience in all phases of management and operation. Field instructor supervision. This internship may require relocation to a site outside of the Las Cruces area. May be repeated up to 12 credits. Consent of Instructor required. Restricted to: Kinesiology Majors majors. S/U Grading (S/U, Audit). Prerequisite(s): Senior standing, GPA of 2.75, completion of all major courses.

SP M 451. Advanced Exercise Physiology
3 Credits
Detailed study of the integrated response of neuromuscular, cardiovascular, and respiratory systems to acute and chronic exercise, nutrition, and environmental conditions with a strong emphasis on laboratory experiences. GPA of 2.75. Prerequisite(s): SP M 271 and SP M 308 or consent of instructor.

SP M 456. Exercise for Special Populations
3 Credits
Fundamentals of kinesiology adapted for adults with various diseases and disabilities. Focus will be on the application of exercise assessment and prescription for selected conditions. Prerequisite(s): SP M 308 and SP M 330; GPA of 2.75.

SP M 458. Physical Dimensions of Aging
3 Credits
This course introduces students to physical, physiological, social, mental, and emotional aspects of human aging. Age-related changes in human function are discussed the context of applied healthcare settings, and the implications for appropriate physical activity and functional independence. GPA of 2.75. Prerequisite(s): SP M 308.

SP M 460. Principles of Strength and Conditioning
3 Credits
Application of research, theory, and methods of high-intensity, resistive overload training. Performance-specific topics include management, nutrition. GPA of 2.75. Prerequisite(s): SP M 308.

SP M 460 L. Principles of Strength and Conditioning Laboratory
1 Credit
An applied examination of the theory, principles, rules and regulations associated with various strength and conditioning exercises to include but not limited to Olympic lifting, powerlifting, bodybuilding, plyometrics, speed, agility and speed-endurance development. Lab required for Kinesiology majors. GPA of 2.75. Prerequisite(s): SP M 308.
SP M 465. Ethics and Legal Issues in Athletic Training
3 Credits
Examination of the legal and ethical issues associated with the practice of athletic training and other health care fields. Must maintain a 3.0 GPA. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: SP M majors.

SP M 498. Advanced Athletic Training I
1-3 Credits (1-3)
Advanced clinical experiences and education in athletic training. Assessment of Athletic Training Program clinical proficiencies as described by the National Athletic Trainer’s Association Education Council. Consent of Instructor required.

SP M 499. Problems
1-3 Credits
Problems in athletic training and independent work in their solutions. May be repeated up to 3 credits. Consent of Instructor required.

SP M 504. Psychology of Sport
3 Credits
Development of coaching techniques to enhance sport performance based on understanding and use of psychological principles. Same as SP M 304 with additional requirements for graduate credits. Consent of Instructor required.

Prerequisite(s): Consent of instructor.

SP M 508. Applied Biomechanics
3 Credits
The application of anatomical, mechanical and electrical concepts to better understand the fundamental nature of human movement. Same as SP M 305 with additional requirements for graduate credits Consent of Instructor required.

Prerequisite(s): Consent of instructor.

SP M 509. Clinical Biomechanics
3 Credits
The application biomechanical analysis of human movement as it relates to clinical proficiencies through the use of anatomical, mechanical and electrical concepts. Same as SP M 409 with additional requirements for graduate credits Consent of Instructor required.

Prerequisite(s): Consent of instructor.

SP M 510. Graduate Athletic Training Seminar I
1-3 Credits (1-3)
Advanced seminar topics in athletic training. Students will explore generalized topics within the field of athletic training under the direct supervision of a Commission on Accreditation of Athletic Training Education (CAATE) accredited Athletic Training Program. Students may engage in teaching and research opportunities in unique areas. Students may explore athletic training topics within the classroom or independently through designated resources Consent of Instructor required.

SP M 511. Graduate Athletic Training I
1-3 Credits (1-3)
Advanced clinical experiences and education in athletic training. Students will examine topics in athletic training in conjunction with faculty members within the Commission on the Accreditation of Athletic Training Education (CAATE) Athletic Training Program at New Mexico State University. Assessment of Athletic Training Program clinical proficiencies as described by the National Athletic Trainers' Association Education Council. Consent of Instructor required.

SP M 512. Inferential Statistics in Sports and Exercise Science
3 Credits
Statistical concepts and methods basic to experiential research to include normal distribution, z-tests, t-tests, analysis of variance and regression analysis. An understanding of sport and exercise science theory is required for students enrolling in this course. Same as SP M 412 with additional requirements for graduate credit Consent of Instructor required.

Prerequisite(s): Consent of Instructor.

SP M 513. Graduate Athletic Training Seminar II
1-3 Credits (1-3)
Advanced seminar topics in athletic training. Students will explore more specialized topics within the field of athletic training under the direct supervision of a Commission on Accreditation of Athletic Training Education (CAATE) accredited Athletic Training Program. Students should be prepared to further explore topics previously covered in SP M 512 (Graduate Athletic Training Seminar I) Students may engage in teaching and research opportunities in unique areas. Students may explore athletic training topics within the classroom or independently through designated resources. Consent of Instructor required.

SP M 514. Graduate Athletic Training Research I
1-3 Credits (1-3)
Advanced research topics in athletic training. Students will explore research and evidence based practices within the field of athletic training. Students will work under the direct supervision of a Commission on Accreditation of Athletic Training Education (CAATE) accredited Athletic Training Program faculty member. Students should be prepared to further explore research topics within a specific discipline with the intent of disseminating and sharing information with the athletic training community. topics previously covered in SP M 512 (Graduate Athletic Training Seminar I) Students may engage in teaching and research opportunities in unique areas Consent of Instructor required.

SP M 515. Graduate Athletic Training II
3 Credits
Advanced clinical experiences and education in athletic training. Assessment of Athletic Training Program clinical proficiencies as described by the National Athletic Trainers' Association Education Council. Consent of Instructor required.

SP M 545. Skill Acquisition and Performance
3 Credits
Behavioral and physiological examination factors that influence the acquisition and performance of motor skills. May be repeated up to 3 credits. Consent of Instructor required. Crosslisted with: SP M 342.

SP M 551. Advanced Exercise Physiology
3 Credits
Detailed study of the integrated response of neuromuscular, cardiovascular and respiratory systems to acute and chronic exercise, nutrition and environmental conditions with a strong emphasis on laboratory experience. Consent of Instructor required.

SP M 556. Exercise for Special Populations
3 Credits
Fundamentals of kinesiology adapted for adults with various diseases and disabilities. Focus will be on the application of exercise assessment and prescription for selected conditions. Taught with PE P 456 with additional work required at the graduate level. Consent of Instructor required.
SP M 558. Physical Dimensions of Aging
3 Credits
This course introduces graduate students to physical, physiological, social, mental, and emotional aspects of human aging. Age-related changes in human function are discussed in the context of applied healthcare settings, and the implications for appropriate physical activity and functional independence. Graduate students in this course are expected to participate in organizing and leading some of the class discussions and assisting in the identification of appropriate materials for the course. Consent of Instructor required.

SP M 560. Principles of Strength and Conditioning
3 Credits
Application of research, theory, and methods of high-intensity, resistance training. Performance-specific topics include management, nutrition, exercise prescription, periodization, lifting techniques, testing, and evaluation. Course will emphasize standards set forth by the National Strength and Conditioning Association preparing students interested in sitting for the NSCA certification examinations. Consent of Instructor required.

SP M 597. Project
1-12 Credits (1-12)
Selected projects for doctoral students. May be repeated up to 12 credits. Consent of Instructor required.

SP M 600. Kinesiology Research
1-3 Credits (1-3)
Research to be conducted under the direction of a Kinesiology faculty member. May be repeated up to 15 credits. Consent of Instructor required.

SP M 608. Cardiovascular Physiology
3 Credits
This graduate level course provides an in-depth study of cardiovascular structure and function. The course assumes that students have a strong background in human physiology. Topics include, but are not limited to: cellular structure of the heart and vascular system; cardiac function, including electrophysiology of the heart; vascular function; neurohumoral control of the heart and circulation, organ blood flow, exchange function of the microcirculation; the impact of common cardiovascular diseases on cardiovascular structure and function, and cardiovascular adaptations to chronic exercise.

SP M 660. Designing Resistance Training Program
3 Credits
Detailed study of the physiological concepts associated with designing resistance-training programs for children, women, seniors, athletic performance and rehabilitation.

SP M 665. Skeletal Muscle: Structure and Function
3 Credits
Basic muscle morphology and physiology with molecular and cellular adaptations in skeletal muscle as consequences to varying exercise regimens.

SP M 700. Doctoral Dissertation
1-18 Credits (1-18)
Doctoral Dissertation hours to be conducted under the direction of a Kinesiology Faculty. May be repeated up to 18 credits. Consent of Instructor required. Thesis/Dissertation Grading.