

# KINESIOLOGY

## Undergraduate Program Information

The **Department of Kinesiology** at New Mexico State University offers a dynamic Bachelor of Science in Kinesiology designed to prepare students for a range of professional careers, advanced study, and meaningful engagement in health, human movement, and education. Grounded in scientific inquiry, applied practice, and experiential learning, our programs equip students with the knowledge, skills, and professional competencies to succeed in diverse fields such as allied health sciences (including physical therapy, occupational therapy, clinical exercise physiology, and pre-medicine pathways), athletic training, strength and conditioning, dance, physical education, performance psychology, and leadership roles within the fitness and wellness industries.

The **Bachelor of Science in Kinesiology** provides a strong scientific foundation in anatomy, physiology, biomechanics, motor behavior, and the psychology of movement, paired with applied learning experiences that build critical thinking, professional competency, and evidence-based practice. Students may tailor their studies through concentrations in **Exercise Science, Performance Psychology, and Physical Education**, each offering distinct pathways and outcomes. The Department of Kinesiology also offers a fully online Bachelor of Science in Kinesiology with a concentration in **Applied Exercise Science**.

The **Bachelor of Arts in Dance** provides focused and progressive training in dance technique, performance, choreography, and movement studies within a supportive and artistically rich environment. Students develop technical strength, creative expression, and cultural and artistic understanding that prepare them for careers in performance, teaching, community arts, and related professional pathways.

In addition, students may pursue **minors in Dance, Exercise Science, or Pre-Health**, which provide meaningful opportunities to explore movement, creativity, and human performance while complementing a variety of academic majors. These programs broaden students' professional skill sets, enrich their educational experience, and strengthen preparation for careers in health, education, performance, and community wellness.

## Graduate Program Information

### Master of Science in Athletic Training

The **Master of Science in Athletic Training (MSAT)** at New Mexico State University is a dynamic, professional graduate program designed to prepare students to become highly skilled, compassionate, and evidence-informed athletic trainers. This 60-credit hour, 2-year (24-month) program blends rigorous academic preparation with meaningful hands-on clinical experiences through a combination of traditional and hybrid coursework. Students develop advanced knowledge in injury prevention, clinical evaluation and diagnosis, emergency care, rehabilitation, and patient-centered healthcare delivery while gaining practical experience in diverse athletic and clinical settings.

The program begins each June and prepares graduates to sit for the **Board of Certification (BOC)** examination leading to the ATC credential. The MSAT is **accredited by the Commission on Accreditation of Athletic Training Education (CAATE)**, ensuring that students are trained to the highest professional standards. Admission is competitive and applications are submitted through the **ATCAS centralized application system**, with a deadline of April 15. Prospective students are encouraged

to reach out for guidance and support as they explore the program. Questions can be directed to the Athletic Training Program Director, Kim O'Connell, at (575-646-5744).

### Doctor of Philosophy in Kinesiology

The **Doctor of Philosophy (Ph.D.) in Kinesiology** at New Mexico State University provides students with the opportunity to engage in deep, meaningful scholarship across the physiological, biomechanical, psychological, and pedagogical dimensions of human movement. The program emphasizes the development of advanced research skills, innovative teaching practices, and scholarly expertise that prepare graduates to contribute new knowledge to the field and improve health, performance, and quality of life across diverse populations.

Doctoral students work closely with faculty mentors to design individualized programs of study aligned with their professional interests and career goals. Areas of specialization include **Exercise Physiology, Biomechanics, Sport Psychology, Motor Behavior, Aging, and Physical Education**. Graduates are prepared for academic faculty positions, postdoctoral research placements, and leadership roles in applied, clinical, educational, and performance settings, where they can shape the future of kinesiology research, practice, and education. Questions can be directed to the Graduate Program Coordinator, Larissa True, at (575-646-5873).

### Admission

Applicants are encouraged to submit materials by **January 15** for priority consideration for fall admission. Admission is competitive and based on a holistic review of academic preparation, research potential, and alignment with faculty expertise. Applicants should identify and connect with a prospective faculty mentor as part of the application process. A complete application typically includes official transcripts, GRE scores, three letters of recommendation, a CV or résumé, a personal statement outlining research interests and career goals, and a faculty support letter from a Department of Kinesiology mentor. To apply, please visit the graduate school (<https://gradschool.nmsu.edu/>) website.

## Degrees for the Department

### Bachelor Degree(s)

- Dance - Bachelor of Arts in Dance (<https://catalogs.nmsu.edu/nmsu/health-education-social-transformation/kinesiology/dance-ba-dance/>)
- Kinesiology (Applied Exercise Science) - Bachelor of Science in Kinesiology (Online) (<https://catalogs.nmsu.edu/global/nmsu-global/kinesiology-applied-exercise-science-bachelor-science-kinesiology-online/>)
- Kinesiology (Exercise Science) - Bachelor of Science in Kinesiology (<https://catalogs.nmsu.edu/nmsu/health-education-social-transformation/kinesiology/kinesiology-exercise-science-bs-kinesiology/>)
- Kinesiology (Performance Psychology) - Bachelor of Science in Kinesiology (<https://catalogs.nmsu.edu/nmsu/health-education-social-transformation/kinesiology/kinesiology-performance-psychology-bs-kinesiology/>)
- Kinesiology (Physical Education) - Bachelor of Science in Kinesiology (<https://catalogs.nmsu.edu/nmsu/health-education-social-transformation/kinesiology/kinesiology-physical-education-bs-kinesiology/>)

## Master Degree(s)

- Athletic Training - Master of Science (<https://catalogs.nmsu.edu/nmsu/graduate-school/athletic-training-master-science/>)

## Doctoral Degree(s)

- Kinesiology - Doctor of Philosophy (<https://catalogs.nmsu.edu/nmsu/graduate-school/kinesiology-doctor-philosophy/>)

## Minors for the Department

- Dance - Undergraduate Minor (<https://catalogs.nmsu.edu/nmsu/health-education-social-transformation/kinesiology/dance-ug-minor/>)
- Exercise Science - Undergraduate Minor (<https://catalogs.nmsu.edu/nmsu/health-education-social-transformation/kinesiology/exercise-science-ug-minor/>)
- Pre-Health - Undergraduate Minor (<https://catalogs.nmsu.edu/nmsu/health-education-social-transformation/pre-health-ug-minor/>)

## Faculty and Administration

**Department Head:** Christopher A. Aiken, PhD

**Professors** Iwasaki, Oliver **Associate Professor** Aiken, True **Assistant Professor** Hirsch, Yoder, Vanderlinden **College Professor** O'Connell **College Associate Professor** Aranda, Meyer, Snyder **College Assistant Professor** McMullen, Spicer

**C. Aiken, PhD** (Louisiana State University) - Department Head, Kinesiology Program Director, Motor Behavior; **R. Aranda, MS** (New Mexico State University) - Physical Education; **K. Hirsch, PhD** (University of Windsor) - Sport and Exercise Psychology; **Y. Iwasaki, PhD** (University of Waterloo) - Recreation; **R. McMullen, MFA** (Florida State University) - Dance; **S. Meyer, PhD** (New Mexico State University) - Strength and Conditioning; **K. O'Connell, MS** (California University of Pennsylvania) - Athletic Training Program Director; **B. Snyder, DAT** (AT Still University) - Coordinator of Clinical Education, Athletic Training; **K. Oliver, PhD** (Virginia Polytechnical Institute) - Physical Education; **K. Spicer, MS** (Northern Arizona University) - Athletic Training; **L. True, PhD** (Michigan State University) - Graduate Program Coordinator, Motor Behavior; **A. Vanderlinden, PhD** (University of Texas, El Paso) - Biomechanics; **H. Yoder, PhD** (University of Alabama) - Exercise Physiology

## Dance Courses (DANC)

### DANC 1110G. Dance Appreciation 3 Credits (3)

This course introduces the student to the diverse elements that make up the world of dance, including a broad historic overview, roles of the dancer, choreographer and audience, and the evolution of the major genres. Students will learn the fundamentals of dance technique, dance history, and a variety of dance aesthetics. Restricted to: Main campus only. May be repeated up to 3 credits.

#### Learning Outcomes

1. Explain a range of ideas about the place of dance in our society.
2. Identify and apply critical analysis while looking at significant dance works in a range of styles.
3. Identify dance as an aesthetic and social practice and compare/contrast dances across a range of historical periods and locations.

4. Recognize dance as an embodied historical and cultural artifact, as well as a mode of nonverbal expression, within the human experience across historical periods and cultures.
5. Use dance to consider contemporary issues and modes of thought.

### DANC 1130. Ballet I 1 Credit (1)

This course is the beginning level of ballet technique. Students learn the basic fundamentals and performance skills of ballet techniques, which may include flexibility, strength, body alignment, coordination, range of motion, vocabulary, and musicality. May be repeated up to 2 credits.

#### Learning Outcomes

1. Apply fundamental movements of ballet techniques.
2. Enhance flexibility, strength, body alignment, coordination, balance, kinesthetic awareness, range of motion, and musicality.
3. Employ basic theories of classical ballet placement and proper alignment.
4. Develop basic ballet terminology, variations in timing and changes of facing, and barre and center combinations.

### DANC 1131. Introduction to Ballroom Dance 1 Credit (1)

An introduction to ballroom dance at the beginning level. Students will learn the fundamentals of technique including carriage, common movement vocabulary, and partnering, and will be introduced to steps and dances from the Bronze Syllabus of American Smooth and International Standard dances. Offered every Fall. May be repeated up to 2 credits.

#### Learning Outcomes

1. Execute the basic figures of various Ballroom dances in American and International styles
2. Demonstrate an understanding of the elements of technique of these forms, including posture, use of the hips and legs, and lead and follow
3. Develop the skills of style and performance quality within the dance
4. Demonstrate improved overall physical capability, musicality, and movement memory
5. Appreciate Ballroom dancing as an artform and a discipline

### DANC 1135. Introduction to Argentine Tango 1 Credit (1)

An introduction to Argentine Tango at the beginning level. Students will learn the fundamentals of technique including carriage, common movement vocabulary, and partnering, as well as the history and culture of the form. Offered Spring of even years. May be repeated up to 2 credits.

#### Learning Outcomes

1. Execute the basic figures of Tango and Argentine Tango
2. Demonstrate an understanding of the elements of technique of these forms, including posture, use of the hips and legs, and lead and follow
3. Develop the skills of style and performance quality within the dance
4. Articulate the cultural and historical underpinnings of these forms as World dances
5. Demonstrate improved overall physical capability, musicality, and movement memory
6. Appreciate Tango as an artform and a discipline

### DANC 1140. Flamenco I 1 Credit (1)

This course introduces the student to the art of flamenco and its cultural features and significance. Students will learn the fundamentals of this art form and introductory techniques and skills, which may include

handwork, footwork, postures, and specific dances. May be repeated up to 2 credits.

#### **Learning Outcomes**

1. Demonstrate a basic level of competency in the principles of alignment, anatomy, coordination, mobility, stability, and stamina.
2. Demonstrate fundamental flamenco techniques relative to spatial awareness, rhythm, phrasing, and sequencing.
3. Demonstrate competency with basic flamenco movement vocabulary.
4. Perform a variety of flamenco dances, poses, steps, hand movements, and combinations.

#### **DANC 1150. Modern Dance I**

##### **1 Credit (1)**

Modern Dance techniques and styles. Students are introduced to proper warm-up techniques, body alignment, control and flexibility. Students work with various rhythms and combinations of movements. The course emphasizes dance technique and creative experience. The history, terminology and philosophy of Modern Dance are also discussed. May be repeated up to 2 credits.

#### **Learning Outcomes**

1. Use a more developed sense of muscle control and strength, stretch and balance, coordination.
2. Demonstrate and verbalize an increased awareness of Modern Dance techniques
3. Execute dance phrases, combining several movements and in more than one rhythm.
4. Demonstrate an increased awareness of musicality while dancing and use Modern Dance Techniques creatively.

#### **DANC 1155. Introduction to Hip Hop Dance**

##### **1 Credit (1)**

This course provides an engaging and energetic introduction to the foundational elements and cultural history of hip-hop dance. Students will learn basic techniques, rhythms, and movements inspired by various hip-hop styles, including breaking, popping, locking, and social dances. The course emphasizes musicality, body awareness, self-expression, and an understanding of hip-hop as a global cultural phenomenon. No prior dance experience is required.

#### **Learning Outcomes**

1. Identify and execute fundamental hip-hop dance movements and techniques.
2. Understand the historical context and cultural significance of hip-hop dance.
3. Develop a basic sense of rhythm, musicality, and timing in relation to hip-hop music.
4. Explore personal style and self-expression through freestyle and choreography.
5. Demonstrate improved body awareness, coordination, and spatial understanding.
6. Engage respectfully with the diverse origins and evolution of hip-hop culture.

#### **DANC 1161. Tap Dance**

##### **1 Credit (1)**

The theory and practice of tap dance technique at the beginning level. No previous dance experience is expected. Coursework includes vocabulary and movement exercises in both Buck & Wing and Rhythm styles. May be repeated once for a maximum of 2 credits. May be repeated up to 2 credits.

#### **Learning Outcomes**

1. Recognize and articulate the fundamentals of tap technique, vocabulary, and history.
2. Exhibit improved timing, dexterity, and style through the experience of various schools of tap dance technique, including Buck and Wing and Rhythm.
3. Define proper body alignment and control and understand basic mechanical concepts essential to efficient movement.
4. Demonstrate improved overall physical capability, musicality, and movement memory.
5. Appreciate tap dance as an artform and a discipline.

#### **DANC 1185. Introduction to Country Western Dance**

##### **1 Credit (1)**

An introduction to Country Western Dance at the beginning level. Students will learn the fundamentals of technique and several dances, including Country Western Two-Step, Nightclub Two-Step, Polka, and Line Dance. Offered Fall of odd years. May be repeated up to 2 credits.

#### **Learning Outcomes**

1. Execute the basic figures of various Country Western social dances.
2. Demonstrate an understanding of the elements of technique of these forms, including posture, use of the hips and legs, and lead and follow.
3. Develop the skills of style and performance quality within the dance.
4. Demonstrate improved overall physical capability, musicality, and movement memory.
5. Appreciate Country Western dancing as an artform and a discipline.

#### **DANC 1220. Introduction to Latin Social Dance**

##### **1 Credit (1)**

An introduction to Latin social dance at the beginning level. Students will learn the fundamentals of technique including carriage, common movement vocabulary, and partnering, and will be introduced to steps and dances from the Bronze Syllabus of American Rhythm and International Latin dances. Offered every Spring. May be repeated up to 2 credits.

#### **Learning Outcomes**

1. Execute the basic figures of various Latin dances in American and International styles.
2. Demonstrate an understanding of the elements of technique of these forms, including posture, use of the hips and legs, and lead and follow.
3. Develop the skills of style and performance quality within the dance.
4. Demonstrate improved overall physical capability, musicality, and movement memory.
5. Appreciate Latin dancing as an artform and a discipline.

#### **DANC 1235. Introduction to West Coast Swing Dance**

##### **1 Credit (1)**

An introduction to West Coast Swing dancing at the beginning level. Students will learn the fundamentals of technique of several Swing forms and the Hustle, including basic steps, partnering, and musical forms. Offered Fall of even years. May be repeated up to 2 credits.

#### **Learning Outcomes**

1. Execute the basic figures of both West Coast Swing and the Hustle.
2. Demonstrate an understanding of the elements of technique of these forms, including posture, use of the hips and legs, and lead and follow.
3. Develop the skills of style and performance quality within the dance.

4. Demonstrate improved overall physical capability, musicality, and movement memory.
5. Appreciate Swing dancing as an artform and a discipline.

**DANC 2130. Ballet II****2 Credits (2)**

Intermediate level of ballet technique; Introduction of more advanced Ballet vocabulary at barre/center work; increase flexibility, strength, body alignment, and coordination for practice of steps/combinations with variations in timing and changes of facing. Restricted to Las Cruces campus only. May be repeated up to 8 credits.

**Learning Outcomes**

1. A successful student will be able to understand and execute with accuracy all the steps presented on the take home quizzes and are encouraged and expected to attend at least two semesters of each level in order to advance to the next level of ballet technique

**DANC 2150. Modern Dance II****2 Credits (2)**

Modern II is designed to further the student's abilities in modern dance technique, to enhance efficient use of weight and momentum, to release held patterns in the body's mechanics, to enrich spatial awareness, and to begin work on performance techniques. May be repeated up to 8 credits.

**Learning Outcomes**

1. Improve accuracy in alignment and shape
2. Improve precision in space, in timing and rhythm, and in focus/intent
3. Learn combinations and movement dynamics quickly
4. Begin to integrate performance techniques while working in the classroom setting
5. Use a concentrated attitude and an open, creative mind to approach the work in an artistic manner unique to your abilities
6. Listen, see and apply all the information given within one class period and over the semester
7. Self-awareness and mindfulness: how much space do you take in the class and why? How aware are you of those around you, and those you are dancing with?
8. Release of weight to create controlled momentum
9. Locating center and moving from there

**DANC 2157. Hip-Hop Dance II****2 Credits (2)**

This course covers hip hop dance and its relationship to other aspects of hip-hop culture, music, and media, with an emphasis on creativity, individuality, and expression. Coursework may include street styles, breaking, and various regional forms. This is an intermediate level dance course. May be repeated up to 6 credits.

**Learning Outcomes**

1. Recognize and articulate the fundamentals of various styles of hip hop dance technique and vocabulary.
2. Contextualize the history and cultural aspects of hip hop dance.
3. Examine the relationship between dance and other aspects of hip hop culture such as music and media representation.
4. Demonstrate improvement in overall physical capability, musicality, and movement memory.
5. Appreciate hip hop dance as an artform and a discipline.

**DANC 2170. Commercial Dance****2 Credits (2)**

This course delves into the dynamic world of commercial dance, focusing on the foundational techniques, stylistic nuances, and performance

demands of commercial jazz and hip-hop. Students will explore the historical evolution, influential choreographers, and current trends within these vibrant dance forms as they apply to the entertainment industry (music videos, live concerts, film, television, and touring). Emphasis will be placed on developing versatility, adaptability, stage presence, and the ability to quickly learn and execute complex choreography.

**Learning Outcomes**

1. Demonstrate proficiency in core techniques and stylistic elements of commercial jazz and various hip-hop styles (breaking, popping, locking, house, new school).
2. Execute complex choreographic phrases with musicality, dynamics, and performance quality.
3. Analyze and articulate the historical and cultural contexts of commercial jazz and hip-hop.
4. Identify and apply strategies for quick retention and execution of choreography.
5. Develop a heightened sense of stage presence, adaptability, and versatility in performance.
6. Understand the professional expectations and demands of the commercial dance industry.
7. Work collaboratively in a studio setting, demonstrating professionalism and respect.

**DANC 2270. Dance Improvisation****2 Credits (2)**

An introduction to the practice of dance improvisation focusing on play and discovery as methods for generating movement and exploring the full potential of the communicative, authentic body in motion. Course content includes concepts in Body, Effort, Shape, Space, Kinesthetic Response, Scoring, and Contact. Offered Spring of even years.

**Prerequisite:** DANC 1150.

**Learning Outcomes**

1. Understand the core concepts of exploration and authenticity and the importance of these ideas to a modern dancer and choreographer.
2. Demonstrate immediacy of presence, both physically and mentally, in the way that they responding to both choices and instincts in the moment.
3. Connect the concepts learned in Modern dance technique to the study of dance improvisation and the concepts of this class to outside work as dancers, students, and citizens.
4. Access the constantly expanding movement vocabulary which will inform their work moving forward in dance technique and composition.
5. Improvise confidently both individually and as part of a group.

**DANC 2310. Bronze American Rhythm****2 Credits (2)**

Bronze level American Rhythm patterns, techniques, and partnering with emphasis on elements of dance. May be repeated up to 6 credits.

**Learning Outcomes**

1. Learn to dance the Bronze DIVIDA Manual in American Rhythm
2. Develop Bronze level dance technique
3. Gain deeper understanding of the Elements of Dance
4. Develop rhythmic accuracy in movement, ability to dance on time discover phrasing
5. Further develop lead follow skills that will enable you to dance at more advanced levels

**DANC 2311. Bronze American Smooth****2 Credits (2)**

Bronze level American Smooth patterns, technique, and partnering with an emphasis on the elements of dance. May be repeated up to 4 credits.

**Learning Outcomes**

1. Learn to dance the Bronze DIVIDA Manual in International Latin
2. Develop Bronze level dance technique
3. Gain deeper understanding of the Elements of Dance
4. Develop rhythmic accuracy in movement, ability to dance on time discover phrasing
5. Further develop lead follow skills that will enable you to dance at more advanced levels

**DANC 2320. Bronze International Latin**

**2 Credits (2)**

This is the style of Latin dance that is danced around the globe and is featured in the World DanceSport Championships. Students will learn the Bronze Level figures and techniques in four (4) International Style dances: Rumba, Cha Cha, Samba & Jive. May be repeated up to 6 credits.

**Learning Outcomes**

1. Learn to dance the Bronze DIVIDA Material for the International Latin Syllabus
2. Develop Bronze level dance technique
3. Gain deeper understanding of the Elements of Dance
4. Develop Smooth accuracy in movement, ability to dance on time discover phrasing
5. Further develop lead follow skills that will enable you to dance more advanced levels

**DANC 2321. Bronze International Standard**

**2 Credits (2)**

This is the style of Ballroom dance that is performed around the globe and is featured in the World DanceSport Championships. Learn the Bronze Level figures and techniques in five (5) International Style dances: Waltz, Tango, Viennese Waltz, Foxtrot & Quickstep. Students will focus on understanding technical elements of dance, memorizing and performing routines. May be repeated up to 6 credits.

**Learning Outcomes**

1. Learn to dance the Bronze DIVIDA Manual in International Standard
2. Develop Bronze level dance technique
3. Gain deeper understanding of the Elements of Dance
4. Develop Smooth accuracy in movement, ability to dance on time discover phrasing
5. Further develop lead follow skills that will enable you to dance at more advanced levels

**DANC 2460. Dance for Musical Theatre**

**2 Credits (2)**

This course will supplement the dance technique curriculum specifically in support of the study of Musical Theatre. Students will practice various social, world, and theatrical dance forms, learn selections from iconic choreography, experience mock dance auditions, and explore the skill of dance composition for musical theatre repertory. Offered every Spring. May be repeated up to 4 credits.

**Prerequisite:** DANC 1130 or DANC 1160.

**Learning Outcomes**

1. Participate successfully in dance techniques and styles outside of the basic tap, jazz, ballet, and modern dance curriculum.
2. Recognize and contextualize musical theatre history and repertory through exposure to significant historical choreography and choreographers.

3. Understand and excel at the skill of taking part in a musical theatre dance audition.

4. Demonstrate improvement in overall physical capability, musicality, and movement memory.

5. Appreciate the practice of musical theatre dance as an artform and a discipline.

**DANC 3110. DanceSport Pedagogy: Smooth**

**3 Credits (3)**

In this teacher education course, students will begin to develop skills necessary in becoming a successful, professional Ballroom Dance Instructor. Students will gain technical mastery of Bronze level figures in the four (4) American Style Smooth Ballroom Dances to include the Waltz, Foxtrot, Tango and Viennese Waltz. Students will gain practical teaching experience in the area of Group Class Instruction with required in class practicums. May be repeated up to 12 credits.

**Prerequisite:** DANC 2311.

**Learning Outcomes**

1. Students will understand several philosophies of teaching
2. They will gain teaching skills through practical experience.
3. The students will teach both group and private lessons.
4. The student will gain knowledge about learning styles.

**DANC 3114. DanceSport Ensemble**

**1 Credit (1)**

Involvement with the DanceSport performance ensemble rehearsal and performance process. May substitute for 1 credit of the Contemporary Dance Ensemble course in the Dance Major. May be taken in every semester of undergraduate study or for up to 8 hours credit. Students can enroll by audition only. Consent of the instructor is required. May be repeated up to 8 credits.

**Learning Outcomes**

1. Collaborate in the process of creating a work of Latin or Ballroom dance.
2. Participate in the process of producing a dance concert with fully realized technical elements including lighting and costumes.
3. Apply the knowledge and skills that are being developed in the study of dance technique, choreography, and pedagogy to the culminating performance experience.
4. Demonstrate a more developed sense of artistry, energy, ingenuity, and presence onstage.

**DANC 3130. Ballet III**

**2 Credits (2)**

The theory and practice of ballet technique at the advanced level. A high level of technical accomplishment, artistry, and professionalism is expected. May be repeated twice for a maximum of 6 credits. May be repeated up to 6 credits.

**Prerequisite:** DANC 2130.

**Learning Outcomes**

1. Achieve a greater clarity of line, released use of turnout, and expressivity in port de bras and epaulement, demonstrating improved adagio and allegro skills at the advanced level.
2. Experience the idiosyncrasies of the Cecchetti, Vaganova, and Bournonville techniques and differentiate the Romantic, Classical, Neo-Classical, and Contemporary styles.
3. Apply experience from other disciplines such as modern dance to the exercise of ballet, referencing concepts such as body patterning and energy pathways.

4. Demonstrate an increased level of physical and artistic achievement and professionalism.

#### **DANC 3150. Modern Dance III**

##### **2 Credits (2)**

The theory and practice of modern dance technique at the advanced level. A high level of technical accomplishment, artistry, and professionalism is expected. Course may be repeated twice for a maximum of 6 credits. May be repeated up to 6 credits.

**Prerequisite:** DANC 2150.

##### **Learning Outcomes**

1. Delve into movement concepts with a greater sense of risk and challenge at the advanced level.
2. Achieve an increased mastery of alignment, control, and efficiency, taking full advantage of the knowledge of body patterning and energy pathways.
3. Improvise solo, in an ensemble, and with a partner, demonstrating the application of instinct and choice in the authentic body.
4. Increase the student driven problem-solving skill that is essential to a professional modern dance artist.
5. Demonstrate a high level of physical and artistic achievement.

#### **DANC 3210. Music for Dancers**

##### **2 Credits (2)**

This course is designed to deepen dancers' understanding of musical principles and their direct application to dance. Students will explore fundamental concepts of rhythm, tempo, dynamics, form, and style, learning how to listen analytically and respond expressively to various musical genres. The class will integrate theoretical knowledge with practical movement exercises, fostering a more nuanced and musical approach to dance performance and choreography. No prior musical training is required, but a basic understanding of dance technique is recommended.

##### **Learning Outcomes**

1. Identify and articulate fundamental musical elements such as rhythm, tempo, meter, and dynamics.
2. Analyze musical structures and forms (AABA, verse-chorus) and apply this understanding to dance.
3. Develop a heightened sense of musicality and timing in their movement.
4. Respond expressively to different musical genres and styles.
5. Utilize musical cues to inform choreographic choices and improvisation.
6. Understand the relationship between music and dance history, recognizing key periods and influential artists.
7. Communicate effectively about musical concepts using appropriate terminology.

#### **DANC 3250. Dance Repertory**

##### **1 Credit (1)**

This course is designed to immerse students in the process of learning, rehearsing, and performing existing dance works (repertory). Students will gain practical experience in various choreographic styles and performance practices, developing their technical proficiency, artistic interpretation, and collaborative skills. The class will focus on understanding choreographic intent, adapting to different movement vocabularies, and preparing works for presentation. Prior dance experience is required, and students should be prepared for rigorous physical and mental engagement. May be taken in every semester of

undergraduate study or for up to 8 hours credit. May be repeated up to 8 credits.

##### **Learning Outcomes**

1. Accurately learn and reproduce complex choreographic sequences from existing repertory.
2. Develop a deeper understanding of various choreographic styles and their historical contexts.
3. Enhance technical proficiency, musicality, and performance quality in diverse dance forms.
4. Cultivate artistic interpretation and expressiveness within a choreographic framework.
5. Collaborate effectively with peers and instructors in a rehearsal setting.
6. Understand the process of preparing a dance work for public performance.
7. Apply critical thinking to analyze and discuss choreographic choices and performance aesthetics.

#### **DANC 3265. Dance Composition I**

##### **3 Credits (3)**

An introduction to the basic tools of dance composition, beginning with improvisation and including body, space, time, energy, and elements of design. Offered Fall of even years.

**Prerequisite:** DANC 2270.

##### **Learning Outcomes**

1. Understand the core improvisational concepts of exploration, authenticity, instinct, and choice, and the importance of these ideas to a modern dancer and choreographer.
2. Connect the concepts learned in Modern I to the study of dance improvisation and composition and the concepts of this class to outside work as dancers, students, and citizens.
3. Build a constantly expanding movement vocabulary.
4. Recognize and use the basic components of dance composition- body, space, time, and energy- and explore the roles of invention and communication in the creation of contemporary dances.
5. Develop the communication skills necessary to articulate and defend academic and artistic choices and to give and receive feedback.
6. Begin building a body of creative work and developing a sense of personal values as an individual and as an artist.

#### **DANC 3310. Silver American Rhythm**

##### **3 Credits (3)**

Silver level American Rhythm patterns and technique with emphasis on performance. May be repeated up to 9 credits.

**Prerequisite:** DANC 2310.

##### **Learning Outcomes**

1. To enhance advanced dance sport skills beyond Bronze Level

#### **DANC 3311. Silver American Smooth**

##### **3 Credits (3)**

Silver level American Smooth patterns and technique with emphasis on performance. May be repeated up to 9 credits.

**Prerequisite:** DANC 2311.

##### **Learning Outcomes**

1. Advance introductory skill levels and enhancing technique towards Gold level

#### **DANC 3320. Silver International Latin**

##### **3 Credits (3)**

Students will learn Silver Level syllabus figures in four (4) International Style dances: Rumba, Cha Cha, Samba & Jive and Bronze Level figures in Paso Doble. Continued training and practice in International Style Latin dance technique. May be repeated up to 9 credits.

**Prerequisite:** DANC 2320.

**Learning Outcomes**

1. Learn and work towards mastery for the four different styles of dances in Dance Sport

**DANC 3321. Silver International Standard**

**3 Credits (3)**

Learn Silver Level syllabus figures in the five (5) International Style Standard dances: Waltz, Tango, Viennese Waltz, Foxtrot & Quickstep. Students will focus on increased technical understanding to increase their ability in partnering and musicality. May be repeated up to 9 credits.

**Prerequisite:** DANC 2321.

**DANC 3350. Dance Pedagogy I**

**3 Credits (3)**

This course will include discussion of human development, body patterning, teaching methods, the structure and analysis of course content, and educational values as they apply to teaching creative movement and dance technique. Student must have one semester each of ballet and modern technique or permission of the instructor to enroll. Offered Spring of odd years.

**Prerequisite:** DANC 2130 and DANC 2150.

**Learning Outcomes**

1. Understand the basic progression of human development and how the study of Creative Movement and Dance can aid in that development physically, cognitively, and emotionally.
2. Recognize basic sociological and developmental demographic factors and determine how to develop lessons that are appropriate, safe, and constructive.
3. Communicate clearly, assertively, thoughtfully, appropriately, and constructively, recognizing communication as a vital skill in education.
4. Expand upon an existing syllabus of terminology, rhythmic structures, and movement vocabulary that is necessary in a comprehensive elementary dance education.
5. Practice executing a basic dance class structure including short and long-term lesson plans and a variety of teaching methods.
6. Begin developing a system of personal values and a philosophy of education that will engender an effective, ethical, and responsible teaching practice.

**DANC 3510V. World Dance**

**3 Credits (3)**

Examination of dance forms from a cross-cultural perspective, focusing on the role of dance in different cultures around the globe. Same as HNRS 347V. May be repeated up to 3 credits.

**Learning Outcomes**

1. An understanding of the social importance of dance in diverse cultural settings
2. A familiarity with the importance of dance as a vehicle through which various identities (i.e. cultural, gender and personal), roles (i.e. social and status) and values (i.e., personal and cultural) are identified and expressed.
3. An understanding of dance as a form of non-verbal communication.
4. The ability to discuss and compare culture's dance forms.

5. The ability to recognize how other art forms, religions, and political climates affect cultural identity.

**DANC 3610. Dance History**

**3 Credits (3)**

A survey of dance history from ancient Greece to the 21st century. Major emphasis on the development of dance as a Theatrical artform, on Ballet and Modern dance in Europe, Russia, and the U.S., and on criticism and theory of choreography and performance. Offered Fall of even years.

**Learning Outcomes**

1. Quantify factual knowledge of the progression of dance including primitive forms, court dance, ballet, and modern dance.
2. Recognize and contextualize important choreography, dancers, choreographers, composers, events, and phenomena in the history of Western Theatrical dance.
3. Discuss some of the root problems that dance historians face, such as the imperfect nature of documentation.
4. Understand how history shapes contemporary practices in dance.
5. Watch dance critically in order to derive choreographic intention and meaning in the work.
6. Articulate and support an informed point of view, both verbally and in writing, about works of concert dance.

**DANC 3710. Somatics and Anatomy of Movement**

**3 Credits (3)**

This course combines the study of human anatomy and physiology with the principles of Somatics in various forms to address dance movement in terms of body connectivity, efficiency, and access to full physical capability. Student should complete one semester of Modern Dance technique before enrolling. Offered Fall of odd years.

**Learning Outcomes**

1. Understand the mechanics of basic human anatomy and physiology, including but not limited to bones, muscles, and joints, and explore the way that this quantitative knowledge can help in understanding and developing the dancer's kinesthetic ability.
2. Recognize the vitality of basic components of wellness, including nutrition and injury prevention and treatment, and the impact that these issues have on dance as a professional practice.
3. Integrate the basic principles of various somatic fields outside of ballet and modern dance technique into their personal artistic practice and understand the ways that these additional methods can enhance their physical capability.
4. Apply their knowledge of physiology, wellness, and somatic systems to the study and practice of dance pedagogy.

**DANC 3720. Dance Technology and Design**

**3 Credits (3)**

This course explores the integration of technology into the creative process, focusing on projects in graphic design and filmmaking. Students will learn the fundamentals of photography, publicity design, sound editing and design, film documentation of live dance, and Dance for the Camera, and will be introduced to software including Photoshop and Final Cut. Offered Spring of odd years.

**Prerequisite:** DANC 3265.

**Learning Outcomes**

1. Demonstrate proficiency with some of the relevant technology, software, and tools that are used in producing digital images and video.

- Effectively promote themselves and their work in their communities and online as 21st century artists and professionals must be prepared to do.
- Think more broadly about the capabilities of their creative work, beginning with the choreographic process, with respect for the way that technology can enhance the artform of concert dance, and produce choreography in non-traditional formats.
- Apply the skill of articulating specific and purposeful artistic choices, as is also being developed in technique, pedagogy, and composition classes.

**DANC 4250. Dance Pedagogy II**  
**3 Credits (3)**

The theory and practice of dance pedagogy focusing in greater depth on technique and branching into professional preparation, including dance studio management. Coursework will include application of somatic and anatomical principles and diverse teaching methods in many disciplines, plus the creation of a business plan and professional portfolio. Outside field experience in teaching dance technique will be required. Offered Spring of even years.

**Prerequisite:** DANC 3350.

**Learning Outcomes**

- Demonstrate a deepening understanding of both theoretical and practical aspects of dance pedagogy, organizing the knowledge, skills, and artistic content of dance into effective, ethical, and responsible teaching practices.
- Give and receive constructive critical feedback to and from their peers.
- More effectively communicate with their students to answer questions and address concerns in the classroom.
- Integrate artifacts, readings, and teaching tools which facilitate critical thinking and technical development in the dance class.
- Prepare and implement a plan to establish and run a school of dance as a business.
- Continue formulating an expanding system of educational values regarding the rights and responsibilities of the teacher, the student, and the institution.

**DANC 4265. Dance Composition II**  
**3 Credits (3)**

Using the tools introduced in Dance Composition I, students will explore new methods of generating movement, delving into language, rhythmic and musical studies, props and architecture, sources of inspiration, and meaning making. Students will also be guided to consider the integration of technical and theatrical elements into the choreographic process and the relationship between their artistic work and their personal and social values.

**Prerequisite:** DANC 3265.

**Learning Outcomes**

- Surpass the principles learned in Choreography I to create increasingly complex contemporary work, informed by new points of inspiration, broader subject matter, and greater relevance.
- Demonstrate a deepening understanding of the choreographic process as an exercise in Meaning-Making, using an unlimited movement vocabulary applied with absolute clarity.
- Articulate the choices in craft and intention that are the underpinnings for the creation of work that is reflective of the artist's personal and social values.

- Create a wide and diverse body of work, utilizing multiple dancers, various styles of music, and varied creative processes.

**DANC 4266. Advanced Independent Projects**  
**1-3 Credits (1-3)**

Independent work in dance practice, pedagogy, composition, or theory under faculty guidance. Intended to allow the student to broaden their experience and expertise in an artistic or academic area of dance beyond the published coursework. This course may substitute for Special Topics within the dance major if a project of sufficient depth and rigor is proposed. Consent of Instructor required. May be repeated up to 6 credits.

**Learning Outcomes**

- Demonstrate development in the skill of self-driven learning.
- Apply strong practices of inquiry and discovery, developed in other cross-disciplinary coursework, to their own personal areas of research and creative interest.
- Exhibit a deeper understanding of specific artistic, academic, or theoretical field within the study of dance, reflective of the student's goals and values.

**DANC 4310. Gold American Rhythm**  
**3 Credits (2+2P)**

Advanced level American Rhythm dance technique and partnering work with choreography and performance emphasized. Includes cultural history and pedagogy methods. May be repeated up to 6 credits.

**Prerequisite:** DANC 3310.

**Learning Outcomes**

- To enhance dance sport skills beyond Silver Rhythm

**DANC 4311. Gold American Smooth**  
**3 Credits (3)**

Gold level American Smooth technique and choreography with an emphasis on performance and competition dancing. May be repeated up to 9 credits.

**Prerequisite:** DANC 3311.

**Learning Outcomes**

- Continue to work towards mastery of dance sport perfection through advanced training

**DANC 4320. Gold International Latin**  
**3 Credits (3)**

Students will complete all syllabus figures through the Gold level in the Rumba, Cha Cha, Samba, Jive and Paso Doble. Advanced training and practice in International Style Latin dance technique. May be repeated up to 9 credits.

**Prerequisite:** DANC 3320.

**DANC 4321. Gold International Standard**  
**3 Credits (3)**

Students will learn Gold Level syllabus figures in the five (5) International Style Standard dances: Waltz, Tango, Viennese Waltz, Foxtrot & Quickstep. Students will focus on physical and cognitive mastery of standard dance technique and elements as well as high-level performance ability, musicality and choreography. May be repeated up to 9 credits.

**Prerequisite:** DANC 3321.

**DANC 4610. DanceSport Certification Preparation**  
**3 Credits (3)**

The Professional Certification process offers extraordinary benefits to dance teachers, deeply enriching their dancing and teaching, and greatly expanding their career opportunities. This intensive course is designed

to fully prepare students in taking the DVIDA and/or ISTD exams in the Smooth, Rhythm, Standard or Latin dances depending on course offered. See subtitle for specific style being taught in schedule of classes. May be repeated up to 12 credits.

**DANC 4710. Senior Project**  
**3 Credits (3)**

As a capstone to the undergraduate study of dance, majors will select a research topic of interest to them and use the information gathered to inform the choreographic or pedagogical process. The project will include both academic and creative components. Students must be in Senior standing. Consent of Instructor required.

**Learning Outcomes**

1. Synthesize the complete undergraduate study of dance technique, performance, pedagogy, and choreography.
2. Connect the practice of academic research to the choreographic or pedagogical process.
3. Demonstrate a reinforced understanding of dance as an art form and the essential practices of creation, communication, meaning making, and reflection.
4. Present a professional portfolio appropriate to a dance artist, including a cover letter, CV, resume, and statement of teaching philosophy.

**DANC 4996. Special Topics**  
**1-3 Credits (1-3)**

Specific subjects to be announced in the Schedule of Classes. May be repeated up to 3 credits.

**Learning Outcomes**

1. Varies

**DANC 4997. Problems**  
**1-6 Credits (1-6)**

Problems in dance education, dance pedagogy, dance performance and independent work in their solutions. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

## Physical Education Courses (PHED)

**PHED 1110. Dance:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1230. Individual Sport:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1290. Team Sport:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1310. Swim I:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1320. Aqua Fit:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1330. Lifeguarding**

**2 Credits (2)**

Skills training for a nonsurf lifeguard. Course will include Standard First Aid and CPR certification. May be repeated up to 2 credits.

**Learning Outcomes**

1. To help the student become aware of the common hazards associated with various types of aquatic facilities and to develop the knowledge and skills to eliminate or minimize such hazards.
2. To help the student develop the skills necessary to recognize a person in distress or in a drowning situation and to effectively rescue that person.
3. To help the student understand their responsibility to their employer, fellow employees and especially to the patrons of their facility.
4. To provide explanations, demonstrations, practice and review of the rescue skills essential for lifeguarding.
5. To instill in the students an understanding and appreciation for the responsibilities, swimming skills and additional duties of lifeguarding.
6. To develop more advance swimming skills to assist in a water rescue.

**PHED 1410. Yoga:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1430. Pilates:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1510. Training:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1620. Fitness:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1630. Career Fitness:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 10 credits.

**Learning Outcomes**

1. Varies

**PHED 1670. Aerobics:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 1830. Running:**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 4 credits.

**Learning Outcomes**

1. Varies

**PHED 1910. Outdoor Experience**

**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

**PHED 2120. Healthy Life Skills and Personal Wellness**

**3 Credits (3)**

This course has been designed to provide students with the knowledge and skills necessary to cultivate a holistic approach to well-being by giving students effective strategies for achieving and maintaining a balanced and fulfilling life, including coping skills to navigate the challenges of college life. Through a combination of lectures, discussions, activities, and self-reflection, students will explore various dimensions of wellness and develop practical strategies to enhance their overall health and vitality.

**Learning Outcomes**

1. Explain the principles of wellness, emphasizing the significance of exercise, nutrition, and wellbeing for sustaining health throughout life.
2. Describe effective strategies and methodologies to enhance wellness.
3. Develop individualized goals pertaining to various facets of wellness to promote personal growth and fulfillment.
4. Evaluate personal wellness levels to establish baseline and monitor progress towards specific goals across diverse dimensions of well-being.
5. Participate in a self-tailored wellness regimen, integrating introspective assessments to monitor personal progress effectively.
6. Critically assess and refine wellness plans based on alterations in wellness evaluations and personal reflections, ensuring continuous alignment with evolving health and fitness aspirations.

**PHED 2996. Special Topics**

**1-3 Credits (1-3)**

Specific subjects to be announced in the Schedule of Classes. Each offering will carry appropriate subtitle. May be repeated up to 6 credits.

**Learning Outcomes**

1. Varies

## Sports Medicine (SPMD - Kinesiology and Athletic Training)

**SPMD 1110. Introduction to Athletic Training**

**3 Credits (3)**

Introduction to the principles of athletic training. May be repeated up to 3 credits.

**Learning Outcomes**

1. Understand the historical development of athletic training and sports medicine.
2. Understand the knowledge and experiences needed to become a Certified Athletic Trainer.
3. Understand the specific responsibilities and duties of an athletic trainer.
4. Understand the diverse jobs settings within the profession of athletic training.
5. Understand the relationship between the athletic trainer and the sports medicine team.
6. Understand some of the general and specific injuries and medical conditions that occur in athletics; their causes, signs and symptoms, treatments, rehabilitation, and prevention.
7. Understand some of the contemporary issues and problems facing the athletic training profession.

**SPMD 1120. Medical Terminology**

**3 Credits (3)**

Study of the structure of medical language with emphasis on sports medicine-related terminology. To include analysis and interpretation of medical documentation. Restricted to: Las Cruces campus only.

**Learning Outcomes**

1. Master the fundamentals of word analysis, including the separation of terms into word roots or combining forms, common prefixes, and suffixes.
2. Differentiate types of medical terms and the relationships among terms.
3. Develop a proficiency in the use of physiological and anatomical terms as reflected in medical documents.
4. Master the terms, words, phrases, and symbols that describe the human body in its various states of health and disease, including essential anatomical terms.

**SPMD 1190. Clinical Practicum I**

**2 Credits (2)**

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.

**Learning Outcomes**

1. The Athletic Training Program application procedures.
2. The ability to perform selected taping and wrapping techniques.
3. Knowledge of HIPAA guidelines, pre-participation physical examinations, environmental illnesses, the history of Athletic Training and its governing bodies, Evidence Based Practice and its implications in the field of athletic training, evaluation procedures for the injured athlete, NMSU AT program and its affiliated clinical sites.
4. Proper documentation for the athletic training environment including SOAP notes.

**SPMD 1195. Clinical Practicum II**

**3 Credits (3)**

Athletic training related content and psycho-motor skills are introduced, enhanced, and assessed in the classroom and clinical rotations.

Emphasis is on competencies and proficiencies previously instructed in didactic courses while providing increased depth of understanding and clinical practice. Must maintain a 3.0 GPA. May be repeated up to 3 credits.

#### Learning Outcomes

1. Demonstrate knowledge and skill in emergency situation prevention, recognition, and management.
2. Demonstrate proficiency in basic skills of musculoskeletal injury recognition and management.
3. Demonstrate competency in basic pre-participation exam skills, including but not limited to taking vital signs.
4. Demonstrate competency in wound care and first aid.

#### SPMD 1310. Introduction to Kinesiology

##### 3 Credits (3)

An introduction to the field of Kinesiology which will explore areas such as exercise physiology, sport and exercise psychology, motor behavior, biomechanics, strength and conditioning, exercise prescription, as well as professional and graduate programs, and allied health and applied careers opportunities.

#### Learning Outcomes

#### SPMD 1350. Social Foundations of Physical Activity

##### 3 Credits (3)

Historical and cultural foundations and vocational, scientific, and educational data on careers in health education, physical education, and recreation.

#### Learning Outcomes

1. Improve students' knowledge of foundations of physical education. (Research) (Standard 4 j, k, l, m, o, p)
2. Improve students' abilities to analyze current physical activity issues based on historical, philosophical, sociological, and psychological perspectives. (Research) (Standard 4 l, m, e, g)
3. Improve students' knowledge of and ability to critically analyze how gender, race, social class, sexual orientation, and ability issues affect physical education and performance programs. (Research, Diversity) (Standard 4j, k, l, m, o; Standard 2 d, g, j, f, k)
4. Improve students' knowledge of forces influencing the development of physical education programs. In particular, attitudes, values, and beliefs about gender, race, social class, sexual orientation, and ability, etc. (Diversity, Practitioners, Reflection, Pedagogy) (Standard 1 a, b, h, l; Standard 4 j, k, l, m, o; Standard 2 a, d, g, j, f, k)
5. Improve students' knowledge of strategies for becoming an advocate in the school and/or community to promote a variety of physical activity opportunities. (Practitioners) (Standard 2 m, n; Standard 3 n, o, p, q, r; Standard 10 d, j, p)
6. Improve students' knowledge of current educational issues and trends. In particular, socio-cultural issues that affect educational, fitness, and sports settings. (Diversity, Research) (Standard 4 j, k, l, m, o, p Standard 9 a, c, e, f, m, n)
7. Improve students' knowledge of how students' learning is influenced by individual experiences, talents, and prior learning, including language and family/community values and conditions. (Diversity, Research) (Standard 1 b, h, l; Standard 2 d, g, j, k, m, n, o; Standard 3 l)
8. Improve students' knowledge of the impact of international changes on the content of physical education, fitness, and sports programs. (Research) (Standard 4 j, k, l, m, o, p)

9. Improve students' ability to critically analyze how gender, race, sexuality and social class issues affect how we view the body, and how these views can affect students' health and participation in physical education, fitness, and sports programs. (Diversity, Reflection) (Standard 2 d, g, j, f, k, m, o) 1
10. Improve students' ability to become critically aware of how their feelings, beliefs, and values in relation to gender, race, social class, sexual orientation, and ability issues will affect their abilities to work as professionals in the fields of physical education, sport, or fitness. (Diversity, Reflection) (Standard 2d, g, j, f, k, m, o Standard 9 e, d, g, l, m) 1
11. Improve students' knowledge of and ability to critically analyze cultural stereotypes of diverse populations of people. (Diversity) (Standard 2 d, g, j, f, k, m, o) 1
12. Improve students' knowledge of how cultural stereotypes influence the development of physical education, fitness and sport programs. (Research, Diversity) (Standard 2 d, g, j, f, k, m, o; Standard 4 j, k, m, o, p, q Standard 8 p) 1
13. Improve students' knowledge of how groups influence individuals, and how individuals influence groups in a democratic society. (Diversity) (Standard 2 d, g, j, f, k, m, o; Standard 4 m, p;) 1
14. Improve students' abilities to communicate in ways that demonstrate sensitivity to all learners. (Diversity, Effectiveness) (Standard 1 d, h, l; Standard 2 d, g, j, f, k, m, o) 1
15. Students will demonstrate through writing the ability to apply the issues discussed in class to their specific fields in ways that benefit society. (Evaluation) (Standard 9 e, g, l, m) 1
16. Students will improve their ability to take the content from readings and present it in thought provoking ways to their classmates. (Research, Evaluation, Reflection) (Standard 9 e, g, l, m; Standard 10 a, d, h, n) 1
17. Writing proficiency is required for a passing grade in this course. (Standard 4 l) 1
18. Improve students' abilities to use computers and other technologies to communicate, network, and/or foster inquiry. (Standard 10 g) 1
19. Consult professional literature, colleagues, and other resources to develop as a professional.(Standard 10 e, f, h, l, n, r)

#### SPMD 2210. Anatomy and Physiology I

##### 3 Credits (3)

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.

#### Learning Outcomes

1. The student will learn and identify bones, connective tissue, joints and muscular structures of the human body.
2. The student will study joints and associated structures of the body.
3. The student will learn about skeletal muscle, origins, insertions, and actions.
4. The student will learn about the fundamentals of the nervous system and associated structures.
5. The student will learn about smooth and cardiac muscle and their association actions.
6. The student will learn the structures associated with the cardiovascular system (heart and blood vessels).
7. The student will learn the location of all visceral organs.

- Evaluation of knowledge is determined through practical identification of anatomical structures via written opened ended exams.

### **SPMD 2210L. Anatomy and Physiology Laboratory**

#### **1 Credit (1P)**

Students will engage in activities designed to enhance appreciation of the anatomical structures related to the content areas for SPMD 2210. Restricted to Las Cruces campus only.

#### **Learning Outcomes**

- The student will learn and identify bones, connective tissue, joints and muscular structures of the human body.
- The student will study joints and associated structures of the body.
- The student will learn about skeletal muscle, origins, insertions, and actions.
- The student will learn about the fundamentals of the nervous system and associated structures.
- The student will learn about smooth and cardiac muscle and their association actions.
- The student will learn the structures associated with the cardiovascular system (heart and blood vessels).
- The student will learn the location of all visceral organs.
- Evaluation of knowledge is determined through practical identification of anatomical structures via written opened ended exams.

### **SPMD 2225. Anatomy and Physiology II**

#### **3 Credits (3)**

This course is the second of two that serve as an introduction to human anatomy and physiology for any student interested in allied health and/or kinesiology. The course entails describing, explaining, and analyzing structure and function from the submicroscopic to the organismal level with emphasis on specific cellular, tissue, and organ structure and physiology, and organ system structure and function# specifically the endocrine, urinary, digestive, integumentary, renal, central nervous, and reproductive systems. Additionally, an analysis of these concepts is included: fluid and electrolyte balance, pregnancy, growth and development from zygote to newborn, and heredity.

**Prerequisite:** SPMD 2210 or BIOL 2210.

#### **Learning Outcomes**

- Identify and describe the major anatomical features of the endocrine, lymphatic, digestive, integumentary, renal, urinary, and reproductive systems.
- Analyze the physiological roles of the endocrine, lymphatic, digestive, urinary, central nervous, immune, and reproductive systems in maintaining homeostasis in the human body.
- Explain how fluid and electrolyte balance is maintained in the human body.
- Compare and contrast the anatomy and physiology of male and female reproductive systems.
- Describe pregnancy from conception to parturition including human growth and development from zygote to newborn.
- Explain heredity and genetic control.

### **SPMD 2225L. Anatomy and Physiology II Lab**

#### **1 Credit (1)**

This is the second in a series of two laboratory courses designed to introduce laboratory practices and techniques for human anatomy and physiology, from the basic cell structure through the organ system level#

specifically the endocrine, digestive, lymphatic, respiratory, urinary, and reproductive systems.

**Prerequisites:** SPMD 2210; SPMD 2210L; or BIOL 2210; BIOL 2210L.

#### **Learning Outcomes**

- Apply the scientific method correctly.
- Collect, analyze, and interpret scientific data.
- Use laboratory equipment correctly and safely.
- Identify the anatomical components of human tissues, organs, and organ systems using models, diagrams, illustrations, or cadaver specimens.
- Describe the functional characteristics of human tissues, organs, and organ systems using models, diagrams, illustrations, or cadaver specimens.
- Analyze the physiological processes of the endocrine, lymphatic, respiratory, digestive, urinary, and reproductive systems.
- Analyze the physiological processes of fluid and electrolyte balance and acid base balance in the human body.
- Analyze heredity and genetic control.

### **SPMD 2250. Fitness for Health and Sport**

#### **3 Credits (3)**

A study of the fitness needs for health enhancement and sport participation.

#### **Learning Outcomes**

- Recognize the importance of incorporating positive fitness/wellness habits within one's lifestyle in terms of enhancing longevity, disease prevention, and overall quality of life.
- Examine various physiological benefits and adaptations to such factors as muscular strength, muscular endurance, cardiovascular fitness, flexibility, and body composition when certain stimuli are applied to each. Assessment of these characteristics will be witnessed primarily in practical experiences within the course's laboratory settings.
- Identify current trends and/or health patterns within society in regards to scientific findings, decline in health habits, and increases in health ailments.
- Compare various nutritional concepts, specifically proper dietary habits and their impact on weight management aspects.
- Describe the role physical activity and sport specific training play on competitive athletic performance.

### **SPMD 2310. Career Preparation**

#### **1 Credit (1)**

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.

#### **Learning Outcomes**

- Career opportunities within human movement and allied health fields
- Chose both a primary and secondary career of their interest
- Search for appropriate graduate schools to match their career choices
- Create a plan by aligning their undergraduate curriculum with their career choices
- Explore additional education (dual majors, minors, and certifications specific to their chosen field)
- Study and create a professional resume
- Create a curriculum vita as a historical reference for future job prospects

8. Write a professional letter of application for jobs and school applications
9. Learn how to seek "outstanding" letters of recommendation
10. Study appropriate interview protocol
11. Practice interviews (one on one, panel and group)

#### **SPMD 3050. Therapeutic Modalities**

##### **4 Credits (4)**

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.

**Prerequisite:** SPMD 2210 or BIOL 2210; 2.75 GPA.

##### **Learning Outcomes**

1. Demonstrate proper assessment techniques to identify appropriate therapeutic modalities for the treatment of injury and illnesses.
2. Design treatment plans based upon sound clinical assessment and appropriate selection of modalities that address the physiological and psychological needs of the patient.
3. Demonstrate competence with the application of a wide variety of modalities including patient preparation, modality application and modification based upon clinical findings using principles of evidence based practice.
4. Perform appropriate documentation of treatments to include patient history, evaluation, treatment goals, expectations and treatment outcomes.
5. Demonstrate competence with the collection and analysis of baseline and post-treatment data to evaluate and interpret treatment outcomes based upon principles of evidence-based practice.

#### **SPMD 3110. Racquet Sports**

##### **2 Credits (2)**

Knowledge and skills related to the racquet sports of tennis, badminton, and pickleball with emphasis on developmental strategies and skill performance that influences pedagogical content knowledge. Administrative issues will be addressed.

#### **SPMD 3120. Theory and Technique of Lifelong Outdoor Leisure Activities**

##### **2 Credits (2)**

Knowledge and skills related to lifelong outdoor leisure activities, including the examination of environmental science and awareness, kinesiology, and fundamental motor skills.

#### **SPMD 3130. Theory and Technique of Sports and Games**

##### **2 Credits (2)**

Knowledge and skills related to team sports and games, with emphasis on developmental strategies and skill performance that influence pedagogical content knowledge. Administrative issues will also be addressed.

#### **SPMD 3140. Designing Student Centered Afterschool Physical Activity Clubs**

##### **3 Credits (3)**

Knowledge, skills and field based practical application for creating student centered and student designed after school physical activity clubs.

#### **SPMD 3150. Theory and Technique of Dance and Rhythms**

##### **2 Credits (2)**

Knowledge and skills related to dance and rhythms, with emphasis on the analysis of dance elements and its role in physical education.

#### **SPMD 3160. Elementary School Physical Education**

##### **3 Credits (2+2P)**

Methods for teaching physical education at the elementary level.

Primary focus on creating a learning environment for the acquisition and enhancement of developmentally appropriate locomotor, manipulative, and nonmanipulative skills. Field experience included. Consent of Instructor required.

**Prerequisite:** GPA of 2.5.

##### **Learning Outcomes**

1. Improve your knowledge of K-5 physical education content, disciplinary concepts, and tools of inquiry related to the development of a physically educated person.
2. Improve your knowledge of and ability to plan instruction based on curriculum goals/objectives and students' experiences.
3. Improve your ability to design and teach developmentally appropriate K-5 physical education curriculum for diverse learners.
4. Improve your knowledge of, and ability to, teach a variety of manipulative, nonmanipulative and locomotor skills and concepts.
5. Improve your ability to teach using a variety of strategies such as cooperative learning, problem-based learning, direct instruction that facilitate learning.
6. Improve your ability to plan effective units/lessons to insure equity and sensitivity to the needs of students with diverse characteristics, including, critically analyzing content/curriculum in light of broad goals for education and b) structuring a safe, educational environment that facilitates learning for all students.
7. Improve your knowledge of and ability to help individuals work productively and cooperatively with others.
8. Improve your ability to create an equitable learning climate in which individual differences are respected and be able to model, teach, and integrate multicultural awareness, acceptance, and appreciation.
9. Improve your knowledge of and ability to incorporate critical thinking, problem solving and creative exploration into your lessons.
10. Improve your knowledge of professional literature, research, organizations, and other technological resources for continuing professional development.
11. Improve your knowledge of and ability to use appropriate professional behavior.
12. Improve your ability to model appropriate verbal and written communications.
13. Improve your ability to encourage students to recognize, question, and interpret ideas from a variety of perspectives.

#### **SPMD 3240. Research Methods in Kinesiology**

##### **3 Credits (3)**

This course will provide you with a foundational understanding of research methods. Specifically, the course is designed to prepare you to critically read, understand, and evaluate research; retrieve scholarly articles; and develop research-related skills for future graduate education and/or professional work in kinesiology.

##### **Learning Outcomes**

1. Research a topic of interest using scholarly sources.
2. Identify a research problem based on relevant literature.
3. Compare research methods in various kinesiology subdisciplines.
4. Discuss ethical issues in research.
5. Design a research methodology to answer a kinesiology question.

#### **SPMD 3250. Introduction to Exercise Science: Exercise Physiology and Biomechanics**

##### **3 Credits (3)**

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.

#### Learning Outcomes

1. Students will learn a basic introduction to both exercise physiology and biomechanics and describe physiological systems and their relationship to exercise.
2. Explain how different forces affect human movement.
3. Evaluate current research in exercise physiology and biomechanics.
4. Apply exercise science concepts to real-world examples.
5. Integrate exercise science concepts into a physical activity lesson.

#### SPMD 3310. Lifetime Activities

##### 2 Credits (2)

Knowledge and skills related to the lifetime activities of swimming, weight training, and other fitness promoting activities with emphasis on learning progressions.

**Prerequisite:** GPA 2.5.

#### Learning Outcomes

1. All course objectives are linked to the InTASC Teaching Standards
2. Improve your ability to design and teach developmentally appropriate fitness lesson plans for diverse learners (e.g. aerobics, yoga, strength training). (Standard 7 a, b, c, l, j Standard 8 a, b, d)
3. Improve your ability to modify instructions, lesson plans and tasks based on students' strengths and needs. (Standard 1 b, Standard 3 e, Standard 7 b, c, i, j, l, Standard 8 a, b, d)
4. Improve your knowledge of, and ability to teach a variety fitness content (Standard 7 a, g, h, k, l, n)
5. Improve your ability to plan effective lesson plans to insure equity and sensitivity to students with diverse characteristics. This includes structuring a safe, educational environment that facilitates learning for all students. (Standard 3, e, Standard 7 q, i)
6. Improve your ability to use self-assessment and peer-assessment to reflect on your teaching and plan for adaptations/adjustments (Standard 8 b, d, Standard 9 g).
7. Improve your ability to evaluate and modify instructional resources and curriculum to better meet the needs of their students. (Standard 4 f, Standard 7 g, Standard 8 a)

#### SPMD 3350. Inferential Statistics in Sport and Exercise Science

##### 3 Credits (3)

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.

#### Learning Outcomes

1. Express mathematical information symbolically, visually, numerically, and verbally.
2. Employ quantitative methods, such as arithmetic, algebra, geometry, or statistics to solve problems.
3. Evaluate mathematical results for reasonableness.
4. Employ technology to organize, analyze, and present statistical information.
5. Interpret and draw inferences from mathematical models such as formulas, graphs, tables, and schematics.
6. Critically evaluate statistical outcomes for their practical significance.

#### SPMD 3410. Exercise Physiology

##### 3 Credits (3)

Basic physiological principles as they apply to exercise and fitness programs. Laboratory experiences included. Requires 2.75 GPA.

**Prerequisite:** SPMD 2210 or BIOL 2210; GPA 2.75.

#### Learning Outcomes

1. Describe the structure and function of skeletal muscle.
2. Illustrate physiological responses and adaptations to acute bout of exercise as well as to exercise training.
3. Describe the structure and function of the cardiorespiratory system.
4. Describe age and sex considerations in sport and exercise.
5. Demonstrate effects of physical activity for health and fitness.
6. Explain the intervention strategies for athletic success.
7. Describe the laboratory procedures used to study the human body system.

#### SPMD 3410L. Exercise Physiology Lab

##### 1 Credit (1P)

Laboratory experiments emphasizing the understanding of fundamental physiological mechanisms, regulating responses, and adaptation to exercise. Basic analytical methodologies pertaining to the energy, muscular and circulorespiratory systems. Includes factors affecting physiological performance capacities and experimental basis of exercise assessment and training.

**Prerequisite:** SPMD 2210, SPMD 2210L.

**Corequisite:** SPMD 3410.

#### Learning Outcomes

1. Develop basic skills and competencies in clinical and experimental laboratory assessment techniques. Emphasis is placed on a healthy population with introductory concepts for special populations.
2. Understand the theory behind basic tests used in the exercise physiology laboratory.

#### SPMD 3450. Biomechanics

##### 3 Credits (3)

The application of anatomical, mechanical and electrical concepts to better understand the fundamental nature of human movement.

**Prerequisite:** SPMD 2210 or BIOL 2210, and GPA of 2.75.

#### Learning Outcomes

1. Understand how human motion is generated using basic anatomical, kinematic, and kinetic concepts, laws, and principles.
2. Demonstrate an understanding of linear and angular motion.
3. Describe human motion using appropriate, well-defined terminology.
4. Demonstrate an understanding of how the body is affected by forces.
5. Utilize kinematic and kinetic concepts to solve computational and practical problems.

#### SPMD 3450L. Biomechanics Laboratory

##### 1 Credit (1)

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:** SPMD 2210 or BIOL 2210, GPA 2.75.

**Corequisite:** SPMD 3450.

#### Learning Outcomes

1. Utilize kinematic and kinetic concepts to solve computational and practical problems.
2. Gain exposure to the various data collection and analysis tools in biomechanics.

3. Apply conceptual biomechanics knowledge to biomechanics datasets.
4. Collaborate in student teams to develop a biomechanics research proposal.

### **SPMD 3550. Psychology of Sport**

#### **3 Credits (3)**

Development of coaching techniques to enhance sport performance based on understanding and use of psychological principles.

**Prerequisite:** GPA 2.75.

#### **Learning Outcomes**

1. Identify psychological characteristics associated with peak performance.
2. Recognize and define the psychological constructs including, but not limited to, confidence, motivation, stress/anxiety, and arousal.
3. Understand how personal factors and situational factors can affect human performance.
4. Describe and explain factors practitioners should consider when diagnosing, designing, and implementing a mental training intervention.
5. Read, evaluate, and apply sport psychology literature.

### **SPMD 3610. Health and Exercise Psychology**

#### **3 Credits (3)**

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:** GPA 2.75.

#### **Learning Outcomes**

1. Describe and compare various theories for explaining health and exercise behaviors.
2. Define key constructs prevalent in motivating clients to maintain or enhance health and exercise behaviors.
3. Describe and explain relationships between various antecedents of exercise and exercise as well as between exercise and various outcomes.
4. Apply health and exercise psychology constructs, such as motivation, mental health, and personality, to realistic scenarios to help promote health and exercise behaviors.

### **SPMD 3650V. Motor Development**

#### **3 Credits (3)**

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.

**Prerequisite:** GPA 2.5.

#### **Learning Outcomes**

1. Define and discuss key terms, concepts, and theories related to lifespan motor development.
2. Analyze the various constraints that surround the development of motor skills and discuss how they contribute to the resulting motor skill behavior.
3. Explain key processes, sequences, factors, and milestones related to various stages of motor development across the life span.

4. Apply theoretical knowledge in a real-world setting through structured field observations of children at various lifespan and developmental stages.
5. Understand basic biomechanical processes as they apply to developmental change.
6. Describe the qualitative as well as quantitative changes that occur in fundamental motor skills (walking, running, jumping, hopping, throwing, kicking, catching, and striking).
7. Assess developmental levels of fundamental motor skills on video and in real-world settings.
8. Identify motor development phenomena that are universal while applying concepts of environmental and sociocultural constraints that contribute to individual variability in motor development.

### **SPMD 3710. Motor Learning**

#### **3 Credits (3)**

An examination of the theoretical foundations and related literature that underline the learning, performing, and retention of motor skills with implications for effective teaching and coaching.

**Prerequisite:** GPA 2.5.

#### **Learning Outcomes**

1. Assess functional differences between motor skill types.
2. Compare motor control theories and how they control human movement.
3. Critically evaluate current research in motor learning.
4. Recommend strategies to improve motor learning in both therapy and sport settings.
5. Facilitate a practical example of motor learning over time.

### **SPMD 4015. Therapeutic Exercise**

#### **3 Credits (3)**

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. May be repeated up to 3 credits.

#### **Learning Outcomes**

1. Apply appropriate clinical reasoning to the selection of therapeutic exercises based upon evidence-based practice guidelines, relevant physical findings, indications, contradictions and precautions.
2. Demonstrate appropriate application of therapeutic exercises and techniques including selection, application, patient instruction, and documentation.
3. Design an individualized therapeutic exercise program incorporating appropriate modifications for tissue repair timelines, physiological and psychological factors, and any additional clinical findings.
4. Demonstrate effective assessment skills to determine safe levels of physical activity for patients.

### **SPMD 4095. Clinical Practicum VII**

#### **3 Credits (3)**

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 may complete a general medical rotation as part of this course. Must maintain 3.0 GPA. Consent of Instructor required. Restricted to: Athletic Training majors.

#### **Learning Outcomes**

1. Be prepared to sit for the Board of Certification (BOC) examination.
2. Confidently understand the BOC exam format, and method of delivery.

3. Meet the requirements to maintain certification, including evidence based practice requirements and continuing education units and their reporting cycles.
4. Demonstrate competence in the following educational content areas for the practice of Athletic Training: evidence-based practice, prevention and health promotion, clinical examination and diagnosis, acute care of injury and illness, therapeutic interventions, psychosocial strategies and referral, healthcare administration, professional development and responsibility.
5. Students will examine the practicality of strength training towards today's athlete as well as how proper periodization implementation affects this mode of activity, accomplishing this by applying both traditional and undulated periodization guidelines.
6. This course will prepare students to sit for the NSCA's Certified Strength Conditioning Specialist (CSCS) exam by relying upon human performance guidelines set forth by the NSCA along with implementing published study resources provided by the NSCA.

### **SPMD 4210. Advanced Exercise Physiology**

#### **3 Credits (3)**

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.

**Prerequisite:** SPMD 3410 and GPA of 2.75 or consent of instructor.

#### **Learning Outcomes**

1. Fundamental concepts about nutrition and its application to human performance
2. Advanced understanding of nutrition and its association with human bioenergetics
3. Human bioenergetics and its responsibility for performance enhancement and outcomes
4. Energy transfer and expenditure under various physical and environmental conditions
5. Pulmonary and cardiovascular responses to exercise
6. Cardiovascular and cellular adaptations to altitude

### **SPMD 4250. Principles of Strength and Conditioning**

#### **3 Credits (3)**

Application of research, theory, and methods of high-intensity, resistive overload training. Performance-specific topics include management, nutrition. Requires SPMD 2210 and SPMD 3410; GPA of 2.75.

**Prerequisite:** SPMD 3410; SPMD 2210 or BIOL 2210; GPA 2.75.

#### **Learning Outcomes**

1. Students will examine both applied and theory-based strength conditioning concepts by applying designated guidelines set forth by the National Strength and Conditioning Association (NSCA).
2. Students will discuss various acute and chronic human performance adaptations by examining practical examples involving (but not limited to) musculoskeletal adaptation, muscular power output, speed and agility characteristics, plyometric training, body composition characteristics, and cardiovascular characteristics, among many others.
3. Students will recognize strength and conditioning adaptations regarding specific groups, such as youth, female, and elderly populations by contrasting various case studies that feature these populations.
4. Students will examine the administration of human performance testing/assessments on subjects of various skill-levels, experience, and athletic backgrounds, while understanding reliability and validity concerns of said assessments, accomplishing this by participating in practical-based performance testing featured in the course's lab component.
5. Students will analyze strength and conditioning testing results in order to properly prescribe a complete exercise regimen for an individual, based on their sport- or fitness-specific goals, accomplishing this primarily through the course's capstone final project.

### **SPMD 4250L. Principles of Strength and Conditioning Laboratory** **1 Credit (2P)**

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.

**Prerequisite:** SPMD 2210 or BIOL 2210, and SPMD 3410; GPA 2.75.

**Corequisite:** SPMD 4250.

#### **Learning Outcomes**

1. Students will examine commonly relied upon human performance testing practices towards various exercise science-based concepts by applying guidelines set forth by the National Strength and Conditioning Association (NSCA).
2. Students will assess various physiological adaptations by conducting performance tests that target muscular power output, speed, agility, anaerobic capacity, aerobic capacity, vertical jumping, plyometric training, and non-traditional training modes (among numerous others).
3. Students will demonstrate proficiency towards proper administration of human performance assessments by effectively conducting, instructing, and demonstrating said assessments and physical capabilities.
4. Students will properly evaluate and interpret human performance testing results by documenting their own performance test results as well their peers' and applying these data to set norms commonly relied upon by professionals in the field.
5. Students will value the importance of effective and efficient training methodologies based on the varying needs of today's physically active population, accomplished by examining the role physical activity and sport-specific training play on competitive athletic performance.
6. Students will use this lab to prepare and sit for the NSCA's Certified Strength Conditioning Specialist (CSCS) exam by relying upon human performance guidelines set forth by the NSCA along with implementing published study resources provided by the NSCA.

### **SPMD 4350. Exercise Testing and Prescription**

#### **3 Credits (3)**

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.

**Prerequisite:** SPMD 2210 or BIOL 2210; SPMD 3410; GPA 2.75.

#### **Learning Outcomes**

1. Students will examine the application and procedures of both fitness and clinical based exercise tests commonly used in the Kinesiology field by participating in practical lab sessions conducted within this course.

- Students will examine appropriate exercise prescription principles designed for healthy adults by applying published ACSM guidelines to various hypothetical subjects and case studies used in this course.
- Students will analyze appropriate exercise programming strategies used by today's practitioners by studying such concepts as established physical activity (PA) minimums and defined lifestyle risks for cardiovascular disease (CVD).
- Students will compare various pre-participation measures for exercise by utilizing such instruments as the PAR-Q and ACSM Algorithm screening tools.
- This course will prepare students to sit for ACSM's credential-based exams by relying upon exercise prescription guidelines set forth by ACSM along with implementing published study resources provided by ACSM.

#### **SPMD 4410. Exercise for Special Populations**

##### **3 Credits (3)**

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:** SPMD 3410 or consent of instructor; GPA of 2.75.

##### **Learning Outcomes**

- To develop an understanding of the pathophysiology of various cardiovascular, pulmonary, metabolic, skeletal muscle, orthopedic, and mental diseases.
- To provide a medical perspective in the treatment and management of individuals with these conditions in which exercise therapy may be beneficial.
- To provide a sound understanding of exercise testing and prescription for a variety of chronic disease states.
- To be able to assess, interpret, and evaluate case studies of diseased individuals and to develop comprehensive rehabilitation programs based on this information.
- To develop the ability to articulate / present information of various diseases / conditions in a professional manner both formally and in a one on one setting.

#### **SPMD 4450. Pathophysiology and Human Function(s)**

##### **3 Credits (3)**

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:** SPMD 2210 or BIOL 2210; SPMD 2210L or BIOL 2210L; SPMD 3410; GPA 2.75.

##### **Learning Outcomes**

- Students will develop knowledge about basic neurophysiological function of the central and peripheral nervous system
- Individuals will develop knowledge about motor control theory and assessment of human movement.
- Students will demonstrate their knowledge about the control processes of both gross and fine motor skills.
- Students will apply knowledge of sensory physiology to the relationship with human performance.
- Individuals will develop and improve their ability to communicate complex theories and physiological processes through both oral and written work.

#### **SPMD 4510. Neurophysiology and Human Function**

##### **3 Credits (3)**

Students will be introduced to a comprehensive study of the human nervous system. Fundamental structures of the central and peripheral nervous system will be discussed to understand the physiology of the brain and rest of the nervous system. This course will also enhance the understanding how sensory information reaches the brain and how information is processed, leading to effective action. In addition, students will be introduced to the basic concepts regarding neurodynamics, neurological mechanisms of pain, and pathophysiology of neurologic disorders/conditions, with emphasis placed on recognition, pathophysiologic signs/symptoms, assessment, and management of selected conditions.

**Prerequisite:** SPMD 2210 or BIOL 2210; SPMD 2210L or BIOL 2210L; SPMD 3410; and GPA of 2.75.

##### **Learning Outcomes**

- Identify and describe the organization of the central and peripheral nervous systems, the structure and function of neurons and glia, and the anatomy of the brain and its internal and external structures.
- Develop knowledge about the basic neurophysiological function of the central and peripheral nervous systems.
- Describe the neurobiology and pathways of the special senses.
- Identify and analyze major neurological disorders and mental health disorders and describe their clinical presentations.
- Describe and understand the clinical examination process relevant to neurological injury, illness, and disease.

#### **SPMD 4520. Adapted Physical Education**

##### **3 Credits (3)**

Selection and scope of corrective activities in posture and body mechanics, and the adaptation of movement activities for the exceptional student.

##### **Learning Outcomes**

- Students will learn to implement principles of inclusion into the practice of physical education.

#### **SPMD 4530. Methods of Teaching Secondary Physical Education**

##### **6 Credits (6)**

Theoretical and practical applications of curriculum, pedagogy and assessment for teaching secondary physical education. Provides the students opportunities to develop curriculum, teach, and assess student learning through a supervised practicum in both middle and high school physical education settings. Consent of Instructor required.

**Prerequisite:** SPMD 3160.

##### **Learning Outcomes**

- Improve your knowledge of 6-12 physical education content, disciplinary concepts, and tools of inquiry related to the development of a physically educated person.
- Improve your knowledge of and ability to plan instruction based on curriculum goals/objectives and students' experiences.
- Improve your ability to design and teach developmentally appropriate 6-12 physical education curriculum for diverse learners.
- Improve your knowledge of, or ability to, teach a variety of skills and concepts a Student-Centered Inquiry as Curriculum approach.
- Improve your ability to teach using a variety of strategies such as cooperative learning, problem-based learning, direct instruction, divergent convergent discovery, that facilitate student learning across difference.
- Improve your ability to plan effective units/lessons to insure equity and sensitivity to the needs of students with diverse characteristics: this includes a) critically analyzing content/curriculum in light of

broad goals for education and b) structuring a safe, educational environment that facilitates learning for all students.

7. Improve your knowledge of and ability to help individuals work productively and cooperatively with others to produce quality work.
8. Improve your ability to create an equitable learning climate in which individual differences are respected and be able to model, teach, and integrate multicultural awareness, acceptance, and appreciation.
9. Improve your knowledge of and ability to incorporate inquiry, critical thinking, problem solving and creative exploration into your lessons. 1
10. Improve your knowledge of professional literature, research, organizations, and other technological resources for continuing professional development. 1
11. Improve your knowledge of and ability to use appropriate professional behavior. 1
12. Improve your ability to model appropriate verbal and written communications. 1
13. Improve your ability to encourage students to recognize, question, and interpret health related ideas from a variety of perspectives. 1
14. Improve your ability to reflect on your teaching in relation to sound educational philosophy, social, moral and other educational issues, theoretical knowledge, research, and your personal beliefs and values. 1
15. Improve your ability to design and implement formal and informal practical assessments with students as a way to check for student learning. 1
16. Use a variety of formal and informal assessment techniques to assess learner performance, provide feedback, and communicate learner progress.

#### **SPMD 4540. Psychology of Coaching in Sport** **3 Credits (3)**

This course is designed to focus on major topics and theories dealing with the social-psychological factors affecting the performance of athletes and teams, with practical suggestions for enhancing the effectiveness of teachers and coaches. The course will also focus on team and group dynamics that influence physical performance.

**Prerequisite:** SPMD 3550 or SPMD 3610.

#### **Learning Outcomes**

1. Examine current literature and popular media to consider the influence of coaching behaviors on human performance in sport and non-sport activities.
2. Compare coaching from a psychological perspective to current understandings in motor learning.
3. Evaluate coaching behavior using evidence-based sources and measurement tools.
4. Develop a coaching portfolio for a sport program of choice.

#### **SPMD 4550. Exploring Extreme Human Performance** **3 Credits (3)**

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.

**Prerequisite:** Consent of instructor and GPA 2.75.

#### **SPMD 4610. Research Seminar** **3 Credits (3P)**

Capstone course for Kinesiology/Pre-Health minors. Consent of Instructor required.

**Prerequisite:** GPA 2.75.

#### **Learning Outcomes**

1. The Student Learning Outcomes are dependent on instructor and specific direction of course with individual group of students, similar to an independent study/research/practicum experience

#### **SPMD 4620. Nutrition and Metabolism of Sport** **3 Credits (3)**

This course addresses the aspects of nutrition that are related to exercise performance. Emphasis will be placed on the bioenergetics systems, the components of nutrition, nutritional and body composition assessments, ergogenic aids, and diet modifications for physically active individuals and athletes.

**Prerequisite:** SPMD 2210, SPMD 3410.

#### **Learning Outcomes**

1. Describe the metabolism of macronutrients and micronutrients.
2. Clarify the effects of high and low-carbohydrate diets on exercise performance.
3. Explain the potential athletic benefits of manipulating fat content in our diet.
4. Discuss increasing protein intake to promote exercise adaptations.
5. Explain specific physiological functions of micronutrients.
6. Specify fluid intake recommendations before, during, and after exercise.
7. Calculate macronutrient recommendations for endurance athletes, strength/power athletes, and team sport athletes.
8. Provide nutritional recommendations for special populations of athletes.
9. Recommend nutrition strategies related to weight management goals. 1
10. Discuss the benefits and challenges of unique body composition assessments. 1
11. Provide macronutrient recommendations within a periodized training program. 1
12. Compare and contrast the ergogenic benefits of popular dietary supplements.

#### **SPMD 4805. Emergency Response** **2 Credits (2)**

Comprehensive approach to the identification of risk factors, preparation of emergency action plans, and recognition and care of emergency medical conditions including those that may lead to sudden death. This is a hybrid course combining online instructional components and clinical skills experience including clinical safety (blood-borne pathogens, ECC, first-aid, etc), and on-field emergency management. Consent of Instructor required.

#### **Learning Outcomes**

1. Identify the individuals involved in the Emergency Response Team
2. Construct the components of an effective Emergency Action Plan.
3. Assess the scene and patient during an emergency situation.
4. Demonstrate proper universal precautions and wound care.
5. Demonstrate effective Cardiopulmonary Resuscitation, AED use.
6. Demonstrate effective Rescue Breathing Airway Management techniques.
7. Demonstrate effective splinting techniques.
8. Demonstrate understanding of the techniques utilized in cervical stabilization

- Identify components of acute care for general medical and orthopedic emergencies

#### **SPMD 4997. Problems**

##### **1-3 Credits (1-3)**

Independent study in either Kinesiology and/or Athletic Training May be repeated up to 9 credits.

##### **Learning Outcomes**

- Varies

#### **SPMD 4998. Internship**

##### **6 Credits (6P)**

A part-time internship in an approved wellness, fitness, athletic, recreation, research lab or other program as agreed upon by the internship supervisor. The student will gain experience in all phases of management and operation. This is a 6-hour internship which can be repeated for an additional 6-credit hours at the same or a different location allowing the student to gain one or multiple field experiences. Field instructor supervision will oversee the students performance. This internship may require relocation to a site outside of the Las Cruces area.

##### **Learning Outcomes**

- Students will apply their academic program didactic knowledge, skills and abilities at a professional site gaining hands-on learning experiences under the supervision of a practicing professional
- Students will learn in a working environment such that the internship becomes the capstone of their undergraduate education allowing them practical experience in a career field of their choice.

#### **SPMD 5005. Foundations of Athletic Training**

##### **3 Credits (3)**

This course provides an introduction to clinical decision making and covers standard techniques and procedures for the evaluation and diagnosis of musculoskeletal injuries and common illnesses, injury prevention concepts, documentation and management. Consent of Instructor required.

##### **Learning Outcomes**

- Demonstration of clinical decision making skills
- Articulation of standard techniques and procedures for evaluation and diagnosis
- Produce standardized documentation of clinical findings.

#### **SPMD 5010. Clinical & Functional Anatomy in Athletic Training**

##### **3 Credits (3)**

This course allows students to develop applied knowledge and hands-on skills for future athletic training practitioners. Emphasizes skills for identifying musculoskeletal structures visually and via palpation, and then assessing their function. Use of anatomical and live human models to develop and demonstrate skills. Acceptance into the MSAT program.

##### **Learning Outcomes**

- Demonstrate knowledge of human musculoskeletal structures and function.
- Identification of bony landmarks for assessment of musculoskeletal conditions.
- Demonstrate appropriate palpation of muscles, bones and joints for musculoskeletal assessment.
- Demonstrate knowledge of actions, origins, insertions and innervations of the major muscle groups of the human body.
- Demonstrate appropriate techniques for assessment of functional movements.

#### **SPMD 5015. Behavioral Health, Wellness, and Prevention**

##### **3 Credits (3)**

Exploration of models of patient care delivery in athletic training, behavioral health, wellness and prevention principles as they apply to an athletic or physically active population.

##### **Learning Outcomes**

- Identify, refer and give support to athletes/patients with behavioral health conditions.
- Collaborate with other healthcare providers to provide appropriate interventions for behavioral health and overall wellness.
- Develop and implement strategies to mitigate risks associated with long-term health conditions across the lifespan including patient education.
- Demonstrate competent communication and patient education strategies within a variety of behavioral health and wellness scenarios.
- Articulate the importance and key components of a mental health emergency action plan.
- Explore and analyze the impact of group identification including the intersectionality of multiple identities on health disparities, patient care and patient outcomes.

#### **SPMD 5020. 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 SPMD 5310 (Graduate Athletic Training Seminar I) Students may engage in teaching and research opportunities in unique areas May be repeated up to 3 credits.

##### **Learning Outcomes**

- Demonstrate increased knowledge within the designated topic areas identified for the semester.
- Demonstrate increased skill in assessing and conducting research for the athletic training community

#### **SPMD 5025. 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. May be repeated up to 3 credits.

##### **Learning Outcomes**

- Demonstrate increased knowledge within the designated topic areas identified for the semester.
- Demonstrate increased skill in teaching or academic preparation techniques as identified for the semester.

#### **SPMD 5030. Graduate Athletic Training II**

##### **3 Credits (3)**

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. May be repeated up to 3 credits.

**Learning Outcomes**

1. Demonstrate increased knowledge within the designated topic areas identified for the semester.
2. Demonstrate increased skill in teaching or academic preparation techniques as identified for the semester.

**SPMD 5050. Clinical Education I****3 Credits (3)**

Integration of clinical competencies with classroom instruction and a supervised field based experience in athletic training to link theory into practice. Consent of Instructor required.

**Learning Outcomes**

1. Demonstrate basic evaluation, taping, bracing and emergency care skills.
2. Select and properly fit protective equipment for a variety of injury and sport scenarios.
3. Demonstrate proper equipment removal for emergency care of the injured athlete.
4. Perform a pre-participation examination including physical evaluation, documentation and referral if needed.

**SPMD 5120. Lower Extremity Injury Evaluation + Lab****4 Credits (4)**

This course provides a comprehensive approach to the pathomechanics, clinical examination, diagnosis, role of clinical outcome measures and appropriate medical referral and treatment of orthopedic injuries and other conditions to the lower extremity. Consent of Instructor required.

**Learning Outcomes**

1. Demonstrate knowledge and ability to apply current best practices in acute care, diagnosis and treatment of injuries involving the lower extremity
2. Demonstrate strong clinical examination skills in order to accurately diagnose and effectively treat the patient.
3. Demonstrate the knowledge and skills necessary to evaluate and provide immediate management of acute injuries.
4. Determine and apply therapeutic interventions designed to maximize the patient's participation and health-related quality of life.
5. Develop and implement strategies and programs to prevent the incidence and/or severity of injuries.

**SPMD 5150. Clinical Education II****3 Credits (3)**

Integration of clinical competencies with classroom instruction and a supervised field based experience in athletic training to link theory into practice.

**Prerequisite:** SPMD 5050.

**Learning Outcomes**

1. Students will become effective practitioners in the field of Athletic Training and Sports Medicine by utilizing critical thinking strategies based in evidence based practice theories combined with pedagogical knowledge of the concepts in Athletic Training.
2. Students will utilize their clinical experience and knowledge of injury evaluation to enhance their athletic training skills working with an athletic population under the supervision of a preceptor.

**SPMD 5180. Therapeutic Interventions I****4 Credits (3+1P)**

Stud of physical rehabilitation theory and techniques used as therapeutic intervention for orthopedic injuries and conditions.

**Learning Outcomes**

1. Demonstrate appropriate application techniques for therapeutic modalities to include thermal, electrical, ultrasound and mechanical therapeutic modalities.
2. Demonstrate proper clinical assessment techniques to establish treatment and rehabilitation plans for a variety of orthopedic injuries and conditions including proper documentation procedures.
3. Demonstrate knowledge of the physiological and pathological processes of trauma, wound healing and tissue repair and their role/implications within the therapeutic intervention process.

**SPMD 5205. Evidence Based Practice****2 Credits (2)**

This course investigates the concepts of evidence based practice as it relates to musculoskeletal assessment, diagnosis and therapeutic interventions with a primary focus on clinician- and patient-oriented outcome measures and appropriate referral decisions. Students will explore primary literature focused on clinical questions related to a comprehensive approach to injury evaluation.

**Learning Outcomes**

1. Define evidence-based practice as it relates to athletic training clinical practice.
2. Explain the role of evidence in the clinical decision-making process.
3. Describe and differentiate the types of quantitative and qualitative research, research components, and levels of research evidence.
4. Describe a systematic approach (eg, five step approach) to create and answer a clinical question through review and application of existing research.
5. Develop a relevant clinical question using a pre-defined question format (eg, PICO= Patients, Intervention, Comparison, Outcomes; PIO = Patients, Intervention, Outcomes).

**SPMD 5220. Upper Extremity Injury Evaluation + Lab****4 Credits (3+1P)**

This course provides a comprehensive approach to the pathomechanics, clinical examination, diagnosis, role of clinical outcome measures and appropriate medical referral and treatment of orthopedic injuries and other conditions to the upper extremity. Consent of Instructor required.

**Learning Outcomes**

1. Demonstrate knowledge and ability to apply current best practices in acute care, diagnosis and treatment of injuries involving the upper extremity
2. Demonstrate strong clinical examination skills in order to accurately diagnose and effectively treat the patient.
3. Demonstrate the knowledge and skills necessary to evaluate and provide immediate management of acute injuries.
4. Determine a therapeutic intervention designed to maximize the patient's participation and health-related quality of life.
5. Develop and implement strategies and programs to prevent the incidence and/or severity of injuries and optimize their patient's overall health and quality of life.

**SPMD 5250. Immersive Clinical Experience****3 Credits (3P)**

Integration of clinical competencies during an immersive, supervised, field based experience in athletic training to link theory into practice. May be repeated up to 6 credits.

**Prerequisite:** SPMD 5150.

**Learning Outcomes**

1. Students will be proficient in the day to day operations of an athletic training room.
2. This immersive experience will prepare students for future employment as a full-time athletic trainers.
3. Students will demonstrate skills in all aspects of athletic training including patient-centered care, clinical examination, diagnosis and intervention, prevention, health promotion and wellness and healthcare administration.

**SPMD 5280. Therapeutic Interventions II****4 Credits (3+1P)**

A detailed study of the physiological effects, indications, contraindication, dosage, and maintenance of modern therapeutic devices related to the treatment and rehabilitation of orthopedic injuries and conditions.

**Prerequisite:** SPMD 5180.

**Learning Outcomes**

1. Demonstrate proper clinical assessment techniques to establish treatment and rehabilitation plans for a variety of orthopedic injuries and conditions including proper documentation procedures.
2. Demonstrate knowledge of the physiological and pathological processes of trauma, wound healing and tissue repair and their role/implications within the therapeutic intervention process.
3. Design treatment plans based upon sound clinical assessment and appropriate selection of modalities that address the physiological and psychological needs of the patient.
4. Demonstrate competence with the collection and analysis of baseline and post-treatment data to evaluate and interpret treatment outcomes based upon principles of evidence-based practice.
5. Demonstrate competence with the application of a wide variety of modalities including patient preparation, modality application and modification based upon clinical findings using principles of evidence based practice.

**SPMD 5310. Inferential Statistics in Sports and Exercise Science****3 Credits (3)**

This course serves to provide an introduction to statistical analyses. The conceptual framework of the course will allow for the application of a variety of statistical concepts in order to better understand the nature of data associated with scientific literature publications. Consent of Instructor required for registration.

**Learning Outcomes**

1. Exhibit an understanding of basic statistical concepts and techniques that are consistent with contemporary and valid research in the field of exercise science.
2. Effectively organize data and accurately calculate appropriate statistics for specific research applications.
3. Exhibit an understanding of specific factors that affect validity, reliability and subjectivity of various data gathering techniques.
4. Exhibit knowledge of how to analyze and interpret data using current appropriate technology (SPSS).
5. Interpret performance and fitness data in order to make appropriate and relevant conclusions.
6. Select an appropriate statistical test upon being presented with a data set, interpret the statistical test, and present the results in APA format.

**SPMD 5350. Principles of Strength and Conditioning****3 Credits (3)**

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

**Learning Outcomes**

1. Understanding of general physiology and its responses to acute and chronic exercise
2. Understanding of cardiovascular effects of exercise, training and sport
3. Understanding of strength training affects on special populations such as youth, women and the elderly
4. Understanding of musculoskeletal changes from exercise, training and sport
5. Practicality and application of power and strength training
6. Comprehension of training programs and how they pertain to different training aspects
7. Demonstrate principles of plyometrics and training
8. Understand and demonstrate principles of periodization

**SPMD 5370. Research Methods in Kinesiology****3 Credits (3)**

This course will provide students with graduate-level understanding of research methods. Specifically, the course is designed to prepare students to critically read, understand, and evaluate research; retrieve scholarly articles; and develop research-related skills for further graduate education and professional work. Students will be trained to become scientific thinkers rather than anecdotal thinkers.

**Learning Outcomes**

1. Be able to accurately identify a research problem.
2. Conduct a literature search and summarize literature to develop a research problem.
3. Develop a hypothesis and research statement appropriate to their specific research interests.
4. Determine an appropriate study design/method to test the hypothesis.
5. Demonstrate understanding of measurement concepts such as validity, reliability, scales of measurement, field tests, and laboratory tests.
6. Interpret statistical analyses, tables, and summaries presented in research.
7. Understand research ethics.
8. Use written and verbal forms for reporting research.

**SPMD 5410. Biomechanics****3 Credits (3)**

The application biomechanical analysis of human movement as it relates to human performance through the use of anatomical, mechanical and electrical concepts. Consent of Instructor

**Learning Outcomes**

1. The student will be able to competently assess physical anatomy, analyze linear and angular forces, examine gait, understand the relationships between kinetics and kinematics, understand how muscle and bone architecture impact human movement, and be familiar with the utilization of various data collection methods used in evaluating and improving human movement.

**SPMD 5450. Exercise for Special Populations****3 Credits (3)**

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. Consent of Instructor

#### **Learning Outcomes**

1. To develop an understanding of the pathophysiology of various cardiovascular, pulmonary, metabolic, skeletal muscle, orthopedic, and mental diseases.
2. To provide a medical perspective in the treatment and management of individuals with these conditions in which exercise therapy may be beneficial.
3. To provide a sound understanding of exercise testing and prescription for a variety of chronic disease states.
4. To be able to assess, interpret, and evaluate case studies of diseased individuals and to develop comprehensive rehabilitation programs based on this information.
5. To develop the ability to articulate / present information of various diseases / conditions in a professional manner both formally and in a one on one setting.

#### **SPMD 5510. Psychology of Sport**

##### **3 Credits (3)**

Development of coaching techniques to enhance sport performance based on understanding and use of psychological principles. Consent of Instructor

#### **Learning Outcomes**

1. Identify psychological characteristics associated with peak performance
2. Describe and explain factors practitioners should consider when diagnosing, designing, and implementing a mental training intervention.
3. Recognize and define the psychological constructs of –for example but not limited to–concentration, confidence, motivation, stress/ anxiety, and arousal.
4. Understand how personality attributes and the environment affect human performance and injury rehabilitation.

#### **SPMD 5550. Skill Acquisition and Performance**

##### **3 Credits (3)**

Behavioral and physiological examination factors that influence the acquisition and performance of motor skills. Consent of Instructor

#### **Learning Outcomes**

1. Describe and explain the principles and processes underlying skilled performance
2. Know the factors to consider when diagnosing, designing, and assessing learning experiences
3. Understand the elements of an effective instructional plan for skill acquisition

#### **SPMD 5575. Advanced Motor Development**

##### **3 Credits (3)**

Advanced coverage of motor development topics including: Theoretical perspectives of motor development; the sequential, age-related, continuous process of physical growth and maturation; changes in movement behavior from infancy to older adulthood; external influences on development of motor skills; research approaches in motor development. Consent of Instructor

#### **Learning Outcomes**

1. Describe the historical progression of motor development within the broader field of kinesiology

2. Explain the various theories and foundational concepts of motor development
3. Understand and apply the processes (social, cognitive, perceptual) involved in motor skill development throughout the lifespan (infancy, childhood, adolescence, adulthood)
4. Identify procedures and methodologies used to assess various aspects of motor development
5. Interpret the supporting literature and research related to the fundamental principles of motor development
6. Apply and transfer the knowledge gained to develop a research proposal to enhance understanding of a motor development topic of interest

#### **SPMD 6005. Athletic Training Research I**

##### **2 Credits (2)**

Instruction and development of research skills through the study of published reports and readings in athletic training and related fields. Consent of Instructor required.

#### **Learning Outcomes**

1. Describe a systematic approach (eg, five step approach) to create and answer a clinical question through review and application of existing research.
2. Develop skill in utilizing multiple scales for critical appraisal of literature and research studies.
3. Develop a relevant clinical question utilizing a predefined question format and conduct a literature review on the subject.
4. Describe multiple forms of research, research and literature resources and the differences between narrative reviews, systematic reviews and meta analyses.
5. Describe and apply concepts of diagnostic accuracy and clinical prediction rules as they pertain to patient centered care and evidence based practice.

#### **SPMD 6010. Organization and Administration in Athletic Training**

##### **3 Credits (3)**

Organization and administration of athletic training services including management, leadership, financial, human resources, facility, information technology and risk management.

#### **Learning Outcomes**

1. Students will employ values consistent with the NATA code of ethics for all health care administration actions.
2. Demonstrate knowledge of legal, ethical and risk management concepts in athletic training and health care administration.
3. Demonstrate mastery of a variety of health care management concepts.
4. Demonstrate comprehension of fiscal management strategies, resource management and facility design as it relates to athletic training.

#### **SPMD 6020. Evaluation of the Head, Neck, Spine and Torso**

##### **3 Credits (3)**

This course provides a comprehensive approach to the pathomechanics, clinical examination, diagnosis, role of clinical outcome measures and appropriate medical referral and treatment of orthopedic injuries and other conditions to the head, neck and spine.

**Prerequisite:** SPMD 5220.

#### **Learning Outcomes**

1. Demonstrate knowledge and ability to apply current best practices in acute care, diagnosis and treatment of injuries involving the head, neck, spine and torso.

2. Demonstrate strong clinical examination skills in order to accurately diagnose and effectively treat the patient.
3. Demonstrate the knowledge and skills necessary to evaluate and provide immediate management of acute injuries and illnesses.
4. Determine a therapeutic intervention designed to maximize the patient's participation and health-related quality of life.
5. Develop and implement strategies and programs to prevent the incidence and/or severity of injuries and optimize their patients' overall health and quality of life.

#### **SPMD 6050. Clinical Education III**

##### **3 Credits (3)**

Integration of clinical competencies with classroom instruction and a supervised field based experience in athletic training to link theory into practice.

**Prerequisite:** SPMD 5150.

##### **Learning Outcomes**

1. Students will become effective practitioners in the field of Athletic Training and Sports Medicine by utilizing critical thinking strategies based in evidence based practice theories combined with pedagogical knowledge of the concepts in Athletic Training.
2. Students will utilize their clinical experience and knowledge of injury evaluation to enhance their athletic training skills working with an athletic population under the supervision of a preceptor.

#### **SPMD 6110. Professional Preparation**

##### **3 Credits (3)**

Knowledge and skills for successful pursuit of athletic training credentials, employment and continuing professional competency; emphasis on current topics and issues contributing to the professional preparation of athletic training. Student must be enrolled in their final semester of the MSAT program to enroll in this course.

##### **Learning Outcomes**

1. Students will create a profile with the Board of Certification (BOC) in preparation for their BOC Examination
2. Students will analyze their individual strengths and weaknesses through practice examinations in order to prepare for a successful challenge of the BOC Examination
3. Students will demonstrate knowledge of basic human resources policies and procedures and the hiring process for athletic trainers.
4. Students will self-assess professional competence and create professional development plans according to personal and professional goals and requirements

#### **SPMD 6150. Clinical Education IV**

##### **3 Credits (3)**

Integration of clinical competencies with classroom instruction and a supervised field based experience in athletic training to link theory into practice.

**Prerequisite:** SPMD 6050.

##### **Learning Outcomes**

1. Students will become effective practitioners in the field of Athletic Training and Sports Medicine by utilizing critical thinking strategies based in evidence based practice theories combined with pedagogical knowledge of the concepts in Athletic Training.
2. Students will utilize their clinical experience and knowledge of injury evaluation to enhance their athletic training skills working with an athletic population under the supervision of a preceptor.
3. Students will demonstrate professional behaviors congruent with the ethical standards of the profession of athletic training.

4. Students will develop, implement, and revise policies that pertain to prevention, preparedness, and response to medical emergencies and other critical incidents.

#### **SPMD 6280. General Medical Conditions & Therapeutic Medications**

##### **4 Credits (3+1P)**

Pathophysiology, assessment, and appropriate intervention and referral for general medical conditions and disabilities; common diagnostic tests and imaging assessment tools; commonly used therapeutic medications.

**Prerequisite:** SPMD 5280.

##### **Learning Outcomes**

1. Recognition of general medical conditions including emergent physical and psychological conditions for intervention, referral or return to play criteria as appropriate.
2. Demonstrate proper clinical examination techniques for the assessment of general medical conditions including signs and symptoms of catastrophic and emergent conditions.
3. Demonstrate knowledge of common therapeutic medications and the general medical conditions they treat within the fields of athletic training and sports medicine.
4. Demonstrate knowledge of the principles of pharmacology, including pharmacokinetics and pharmacodynamics, as they relate to the fields of athletic training and sports medicine.
5. Demonstrate knowledge of federal, state and local laws, regulations and procedures for proper storage, disposal, transportation, dispensing and documentation dealing with prescription and non-prescription medications.

#### **SPMD 6310. The Social Construction of the Body**

##### **3 Credits (3)**

This course will explore how people's health and physical activity experiences and choices are often shaped by cultural narratives and expectations of the male and female body. Designed for graduate students in allied health and physical activity professions

#### **SPMD 6350. Advanced Exercise Physiology**

##### **3 Credits (3)**

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

##### **Learning Outcomes**

1. Fundamental concepts about nutrition and its application to human performance
2. Advanced understanding of nutrition and its association with human bioenergetics
3. Human bioenergetics and its responsibility for performance enhancement and outcomes
4. Energy transfer and expenditure under various physical and environmental conditions
5. Pulmonary and cardiovascular responses to exercise
6. Cardiovascular and cellular adaptations to altitude

#### **SPMD 6410. Cardiovascular Physiology**

##### **3 Credits (3)**

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. Consent of Instructor

**Learning Outcomes**

1. The student will demonstrate a comprehensive knowledge cardiovascular structure and function
2. The student will be able to relate common cardiovascular pathophysiology to cardiovascular functional impairments and physical functional limitations.
3. The student will be able to discuss chronic exercise training adaptations on the cardiovascular system and their value as a treatment strategy for cardiovascular diseases.

**SPMD 6450. Skeletal Muscle: Structure and Function**

**3 Credits (3)**

Basic muscle morphology and physiology with molecular and cellular adaptations in skeletal muscle as consequences to varying exercise regimens. Consent of Instructor

**Learning Outcomes**

1. To gain knowledge of the structure and function of skeletal muscle
2. To gain knowledge related to the skeletal muscle in reference to cellular and molecular responses and adaptations to exercise
3. To understand laboratory procedures used to study muscle metabolism
4. To develop ability to scientifically critique published papers and present them in a professional manner

**SPMD 6510. Designing Resistance Training Program**

**3 Credits (3)**

Detailed study of the physiological concepts associated with designing resistance-training programs for children, women, seniors, athletic performance and rehabilitation. Consent of Instructor

**Learning Outcomes**

1. Fundamental components associated with resistance training and exercise prescription
2. Compare and contrast isometric, dynamic, variable, isokinetic, eccentric, concentric resistance training
3. Design programs guided by a needs analysis
4. Demonstrate appropriate techniques and implement systems for training
5. Study physiological adaptations of resistance training for women, children, seniors, athletics and rehabilitation
6. Understand anatomical and physiological changes associated with detraining
7. Integrate components and concepts of resistance training for program design (periodization)
8. Explore alternative training programs

**SPMD 6710. Project**

**1-12 Credits (1-12)**

Selected projects for doctoral students. May be repeated up to 12 credits.

**Learning Outcomes**

1. Students will develop research skills through the work on projects with faculty members.

**SPMD 6750. 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.

**SPMD 6996. Special Topics**

**1-3 Credits (1-3)**

Offered under various subtitles that indicate the subject matter. May be repeated up to 9 credits.

**Learning Outcomes**

1. Varies

**SPMD 6999. Capstone Project**

**1,3 Credits (1,3)**

Students will prepare an individualized capstone project and prepare for the board exams.

**Prerequisite:** SPMD 5205.

**Learning Outcomes**

1. Utilize evidence-based research and data from the field of athletic training to create a scholarly capstone project.
2. Disseminate communicate project findings to appropriate stakeholders by various presentation methods.
3. Advocate for the profession of athletic training via the capstone project.

**SPMD 7000. 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.

**Learning Outcomes**

1. Varies

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