The Exercise and Movement Sciences concentration prepares students for advanced study in a number of exercise and movement related fields. This degree concentration examines Kinesiology from the perspectives of exercise physiology; biomechanics; motor learning and development; and the psychological and the social-cultural aspects of physical activity. The programmatic approach is multidisciplinary and invites study in the physical, biological and social sciences, psychology, philosophy, and communication. The degree program examines those factors that influence the form, function, and effectiveness of exercise and movement across the lifespan and for the disabled.

This degree concentration will prepare students who wish to become exercise physiologists or fitness specialists in clinical, research, educational, or business settings, or who seek careers in physical or occupational therapy, biomechanics, motor learning and development, and ergonomics. Students will also be prepared for advanced study in such fields as sport history, sport sociology, sport and exercise psychology, and at-risk youth development. In addition, students who wish to pursue graduate studies in these areas will be well prepared to do so. Students will also be ready to pursue endeavors in the private sector.

**PRE-REQUISITES TO CORE REQUIREMENTS (13-15 Units)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 100</td>
<td>Human Biology ^1</td>
<td>3-5</td>
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<tr>
<td>BIOL 230</td>
<td>Introduction to Biology I ^4</td>
<td>3</td>
</tr>
<tr>
<td>MATH 124</td>
<td>Elementary Statistics ^3</td>
<td>3</td>
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<tr>
<td>KIN 250</td>
<td>Introduction to Kinesiology ^4</td>
<td>3</td>
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**CORE REQUIREMENTS (19 Units)**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOL 328</td>
<td>Human Anatomy ^2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 220</td>
<td>Principles of Human Anatomy ^40</td>
<td>3</td>
</tr>
<tr>
<td>KIN 457</td>
<td>Culture, Gender and Movement ^6</td>
<td>3</td>
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<tr>
<td>KIN 480</td>
<td>Anatomical Kinesiology ^7</td>
<td>4</td>
</tr>
</tbody>
</table>
CONCENTRATION: Exercise and Movement Sciences

BIOL 212 Principles of Human Physiology 10 3
BIOL 213 Principles of Human Physiology Lab 11 1
CHEM 101 Survey of Chemistry and 4-5
CHEM 102 Survey of Chemistry Lab (OR)
CHEM 115 General Chemistry 12 3
PHYS 101 Conceptual Physics 13 and
PHYS 102 Conceptual Physics Lab 14 (OR)
PHYS 111 General Physics I 15 and
PHYS 112 General Physics I Lab 16 4
KIN 482 Exercise Physiology 17 3
KIN 483 Exercise Physiology Lab 18 1
KIN 485 Biomechanics 20 3

(OR) KIN 697-8 Integrative Research Seminar 21, 698 22 3
(OR) KIN 699 Independent Research 23 3
(OR) KIN 696 Kinesiology Community Internship 24 3

KIN Activities 1 Advisor Approved Activity Course (KIN/DANC) 25 1

Students must choose an emphasis area which accounts for 11-12 Units in order to complete the degree program.

THE EMPHASIS AREAS ARE AS FOLLOW:

MOVEMENT SCIENCE

Neuromuscular Science (12 Units)
KIN 487 Motor Development 26 3
KIN 538 Therapeutic Exercise 27 3
KIN 680 Quantitative Analysis of Human Performance 28 3
KIN 636 Neuromotor Control Processes 29 3

OR

Human Performance Analysis (12 Units)
KIN 325 Computer Applications in Kinesiology 30 3
KIN 331 Peak Performance 31 3
KIN 539 Motor Assessment of Individuals with Disabilities 32 3
KIN 680 Quantitative Analysis of Human Performance 28 3
SOCIAL SCIENCE

Fitness, Physical Activity, & Society (12 Units)

KIN 502  Sport and Social Issues

Select 9 Units from the following courses:

KIN 255  Health Related Fitness & Wellness
KIN 322  Sport in America
KIN 437  Physical Dimensions of Aging
KIN 490  Introduction to Sport and Fitness Management
KIN 510  Sport, Movement and Screen Culture

* Required Course

OR

Social Science Studies in Physical Activity (11 Units)

KIN 489  History/Philosophy of Physical Activity

Select a minimum of 9 Units from the following courses:

KIN 322  Sport in America
KIN 331  Peak Performance
KIN 502  Sport and Social Issues
KIN 510  Sport, Movement and Screen Culture

* Required Course

EXERCISE SCIENCE

(CPR IS REQUIRED)

Physiology of Fitness & Health (12 Units)

KIN 490  Introduction to Sport and Fitness Management
KIN 555  Exercise Testing and Prescription
KIN 683  Applied Exercise Physiology
KIN 690  Internship

OR

Fitness Programming in Youth and Elderly Populations (11 Units)

KIN 308  Instructional Analysis: Fitness Activities
KIN 490  Introduction to Sport and Fitness Management
KIN 437  Physical Dimensions of Aging
KIN 555  Exercise Prescription

TOTAL FOR CONCENTRATION 66-70

Page 3 of 4
COURSE PRE-REQUISITES

1. None
2. Sophomore, upper division, or graduate level major in biology, biochemistry, chemistry, clinical science, kinesiology; BIOL 230; with a grade of C- or better, or consent of instructor.
3. Satisfactory completion of ELM requirement.
4. Completion of GE Segment I with grades of C or better; undeclared with interest in KIN or declared KIN major.
5. ENG 214 with grade of C- or better or equivalent; undeclared with interest in KIN or declared KIN major.
6. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250 with a grade of C or better; two additional courses of the GE Segment I requirements; upper division standing or consent of instructor.
7. Passing JEPET or ENG 414 or KIN 330 GW; two additional courses of the GE Segment I requirements; BIOL 328 or BIO 220 and KIN 250 (formerly KIN 350), all with grades of C or better; upper division standing or consent of instructor.
8. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250 with a grade of C or better; two additional courses of the GE Segment I requirements; upper division standing or consent of instructor. Concurrent enrollment in an activity course is recommended.
9. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250 with a grade of C or better; two additional courses of the GE Segment I requirements; upper division standing or consent of instructor.
10. CHEM 101 or CHEM 115 with a grade of C- or better; BIOL 100 and BIOL 101 with a grade of C or better, or BIOL 210 with a grade of C or better.
11. 50 or above on ELM or approved exemption, or MATH/ESM 70 with grade of C, and satisfactory score on chemistry placement exam.
12. High school algebra and score of 50 or above on entry level mathematics (ELM) examination, which must be taken prior to enrollment.
13. Must be taken concurrently with PHYS 111.
14. Must be taken concurrently with PHYS 111.
15. MATH 199 (formerly MATH 109) or equivalent. Must be taken concurrently with PHYS 112. Score of 50 or above on entry level mathematics (ELM) examination, which must be taken prior to enrollment. Acceptable score on the physics readiness test (to be administered during first week of class).
16. Must be taken concurrently with PHYS 111.
17. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250, BIOL 212 and BIO 213, all with grades of C or better. Must be taken concurrently with KIN 483.
18. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250, BIOL 212 and BIO 213, all with grades of C or better. Must be taken concurrently with KIN 482.
19. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250, Math 124 or equivalent with all grades of C or better; upper division standing or consent of instructor.
20. Passing JEPET or ENG 414 or KIN 330 GW, and two additional courses of the GE Segment I requirements; BIOL 328 or BIO 220, KIN 250, and KIN 480, all with grades of C or better; upper division standing or consent of instructor.
21. Upper division standing; or consent of instructor; passing JEPET or ENG 414 or KIN 330 GW and two additional courses of the GE Segment I requirements; KIN 384, KIN 483, KIN 485, KIN 486. Must be taken concurrently with KIN 699. Enrollment preference given to graduating seniors.
22. Passing JEPET or ENG 414 or KIN 330 GW and two additional courses of the GE Segment I requirements; KIN 384, 483, 485, 486; upper division standing; or consent of instructor. Must be taken concurrently with KIN 699. Enrollment preference given to graduating seniors.
23. Consent of associate chair and supervising instructor. Overall GPA of 3.0 or above.
24. KIN 384, KIN 482, KIN 483, KIN 485, KIN 486, and KIN 504; upper division standing or consent of instructor. Enrollment preference given to graduating seniors.
25. Advisor approval.
26. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250 with a grade of C or better; two additional courses of the GE Segment I requirements; upper division standing or consent of instructor.
27. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250, all with grades of C or better; two additional courses of the GE Segment I requirements; KIN 482/KIN 483 or KIN 355 - KIN 480; upper division standing or consent of instructor.
28. KIN 483 with grade of C or better; upper division standing or consent of instructor.
29. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250 with a grade of C or better; two additional courses of the GE Segment I requirements; KIN 486; upper division standing or consent of instructor. PSY 381 or BIOL 642 is recommended.
30. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250 with a grade of C or better; two additional courses of the GE Segment I requirements; upper division standing or consent of instructor. Enrollment priority to kinesiology majors.
31. ENG 214 and two additional courses of the GE Segment I requirements; upper division standing or consent of instructor.
32. Passing JEPET or ENG 414 or KIN 330 GW, and KIN 250, all with grades of C or better; KIN 536 and two additional courses of the GE Segment I requirements; 537 recommended; upper division standing or consent of instructor.
33. KIN 195 or equivalent, KIN 480, KIN 482, KIN 483, or consent of instructor.
34. Upper division standing or consent of instructor; ENG 214.
35. Upper division standing or consent of instructor. ENG 214 and two additional courses of the GE Segment I courses; upper division standing.
36. KIN 195 or equivalent, KIN 480, KIN 482, KIN 483, or consent of instructor.
37. Passing JEPET or ENG 414 or KIN 330 GW and two additional courses of the GE Segment I requirements; BIOL 328, BIOL 212, and BIOL 213, and KIN 384, 482, and 483 with grades of C or better; upper division standing or consent of instructor.
38. KIN 300 (may be taken concurrently); successful completion of fitness assessment; or consent of instructor.
39. BIOL 100 and 101, or BIOL 212 and 213.
40. Restricted to majors and minors in biology and biochemistry, majors in kinesiology, and majors in environmental studies under the natural resources management and conservation concentration. Undergraduate students; score of 50 or above on Entry Level Mathematics (ELM) examination or approved exemption, or MATH/ESM 70 with grade of C- or better. Passing score on math and writing skills diagnostic test administered the first day of class. Recommended: CHEM 115; and qualified for ENG 114 or ENG 209.