Kinesiology

Mission

We promote health and well-being by creating and disseminating knowledge about physical activity and active living. Through discovery, learning and engagement we improve the lives of citizens of Iowa, the United States and the world.

Goals

The department has identified the following goals to support this mission:

1. We seek to improve the lives of citizens of Iowa, the United States, and the world by the creation and dissemination of knowledge about physical activity and its relationship to health and well-being.
2. We prepare scholars and professionals in the study of physical activity at the undergraduate and graduate levels.
3. We educate the public and the University community in the scientific aspects of physical activity especially exercise, sport, and the role of movement throughout the lifespan.

Undergraduate Study

The Department of Kinesiology offers two Bachelor of Science degrees: Athletic Training and Kinesiology & Health. The undergraduate curriculum major/option is comprised of three components: general education, required departmental courses and the component courses. The intent of the general education component is to promote intellectual and personal growth and to prepare students for success in the basic, advanced and major/option components. Required courses provide an introduction to the field and fundamental principles of physical activity, fitness, health and disease.

B.S. degree in Athletic Training

Certified Athletic Trainers are allied medical health professionals who specialize in the prevention, assessment, treatment and rehabilitation of injuries to athletes and physically active individuals who are engaged in physical and athletic activities. To gain certification, candidates must graduate from a CAATE accredited athletic training education program and successfully pass the Board of Certification (BOC) examination. Many states also have licensure requirements to practice athletic training. The Athletic Training education program at Iowa State University, accredited since 2001, includes various athletic training clinical rotations including high school, physical therapy clinics, surgical observation experiences, and emergency room observation. The Athletic Training Program utilizes a competitive admission process for undergraduate students.

B.S. degree in Kinesiology & Health

The Kinesiology & Health major includes four specialization options. Coursework within each specialization option builds upon personal and scholarly learning by enabling students to master content and skills specific to career applications. Options comprise a focused area of study within Kinesiology. Options available are:

1. Community and Public Health
2. Exercise Science
3. Pre-Health Professions
4. Physical Education/Teacher Education

Academic options within the Kinesiology & Health major

Students in the Community and Public Health option are prepared for professional employment at local, state or national health agencies, medical centers, and other public organizations that seek to promote health in the population. The curriculum prepares students to take the Certified Health Education Specialist certification examination upon graduation.

Students in the Exercise Science option are prepared for professional roles as health and fitness leaders or program managers. Employment opportunities include work in corporate fitness programs, health clubs, cardiac rehabilitation programs or personal training. Graduates are able to plan, implement and supervise exercise programs which will improve fitness and health. Graduates also have a basic understanding of economic and management issues related to business applications in the health and fitness field.

Students in the Pre-Health Professions option utilize an interdisciplinary approach to the study of human movement. In so doing, they become prepared for graduate study in Kinesiology or advanced study leading to careers in medicine, physical therapy, or other allied health programs.

Students in the Physical Education/Teacher Education option are prepared to teach physical education in grades K-12 and to meet the State of Iowa learning outcomes for teachers. Graduates can plan developmentally appropriate physical education, and individualize instruction and assessment for diverse audiences. Enrollment in the Physical Education/Teacher Education option is limited because of accreditation requirements and the provision of more individualized field experiences.

Learning outcomes for the undergraduate degree

Despite the diversity of options, the learning outcomes comprise a common framework for each student as they matriculate through Iowa State University.

The learning outcomes emphasized in academic coursework in the Department of Kinesiology are:

Communication

Uses clear and effective written, oral, visual, and electronic (WOVE) communication techniques to foster inquiry, collaboration, and engagement in physical activity and health related settings.

Lifelong learning, assessment, and self-reflection

Analyzes and evaluates one’s own knowledge, abilities and actions relative to professional standards, seeks opportunities to grow professionally, and utilizes self-assessment and assessment of others to foster physical, cognitive, social, and emotional well-being.

Content knowledge, discovery, and critical thinking

Understands fundamental concepts of physical activity and health, conducts scientific inquiry, and applies critical thinking to solve problems from personal, scholarly, and professional perspectives.

Ethics, diversity, and social justice

Demonstrates leadership and social responsibility to improve quality of life for others and ensures equitable access for diverse groups by creating appropriate environments to initiate and maintain a physically active, healthy lifestyle.

Other Program Offerings:

Endorsement to coach interscholastic athletics

The State Department of Education has provided for the endorsement of licensed teachers for the coaching of athletic teams in schools. The endorsement does not lead to licensure to teach physical education. For requirements of the program, leading to the coaching endorsement, see Teacher Education, Requirements for Areas of Specialization.

Endorsement to teach health education

Those interested in teaching health education in the public schools may get a primary endorsement or an additional endorsement. The State Department of Education has approved the Health Teaching Licensure for grades 5-12.

Basic Activity Instruction Program

The department offers a wide selection of beginning, intermediate, and advanced courses in the areas of aquatics, dance, and sports. These courses are designed to serve general education purposes for all students.

B.S./M.S. degree in Diet and Exercise

A combined Bachelor of Science and Master of Science (B.S./M.S.) degree in Diet and Exercise is available. The program is jointly administered by the Department of Food Science and Human Nutrition (FS HN), within the College of Agriculture and Life Sciences and the College of Human Sciences, and the Department of Kinesiology, within the College of Human Sciences. Students interested in this program must enroll as freshmen in the Pre-Diet and Exercise program. In the fall of the junior year, students will apply for admission to the B.S./M.S. program.
Students not accepted into the program will continue toward completion of a B.S. degree in Dietetics or Kinesiology & Health. Coursework has been designed to facilitate a 4-year graduation date for those students not accepted into the program and electing to complete a single undergraduate degree. Students accepted into the program will progress toward completion of B.S./M.S. degrees in Diet and Exercise.

**Dance**

Coursework in dance provides opportunities for students to develop an understanding and appreciation of dance as part of a liberal education. Those interested in teaching dance and Physical Education in the public schools may major in Kinesiology and Health (Teacher Licensure option) and minor in Dance. An interdisciplinary Performing Arts major with a Dance emphasis is available through the College of Liberal Arts and Sciences. For further information see Index, Theatre and Performing Arts.

**Graduate Study**

The Department of Kinesiology graduate seeks to integrate discovery and learning by preparing graduate students to understand and create basic and applied knowledge in the study of physical activity, exercise and sport. The normal prerequisite to major graduate work is the satisfactory completion of a curriculum essentially equivalent to that required of undergraduate students in kinesiology at this university. However, it is possible for students to qualify for graduate study if undergraduate preparation has been in a related area.

Students in the M.S. and Ph.D. degrees are required to complete original research and write a thesis or dissertation. There is a non-thesis degree option for M.S. students requiring more coursework and an internship experience or other creative component. Specific information about the requirements for these degree options is available from the department office or from the department web site (http://www.kin.hs.iastate.edu/graduate).

The department participates in the interdepartmental minor in gerontology (see Index).

**Curriculum in Athletic Training**

The athletic training major prepares students for a career as an athletic trainer in high school, college or professional settings or for work in other settings (such as sports medicine clinics, the military, industry, and fitness centers). See program details for course requirements. Admission procedures and technical standards can be found at www.cycloneathletictraining.com (http://www.cycloneathletictraining.com).

**Curriculum in Kinesiology and Health**

The curriculum in Kinesiology and Health is designed for students preparing to enter professional areas related to the health, exercise or sport science fields. Students majoring in Kinesiology & Health may select one of four options:

1. Community and Public Health
2. Exercise Science
3. Pre-Health Professions
4. Physical Education Teacher Education

Minors in dance, athletic coaching, exercise science, health promotion, kinesiology, and sport and recreation are available; see requirements under Kinesiology, Courses and Programs.

A major in Performing Arts with a dance emphasis is available; see requirements under Curriculum in Performing Arts in Theatre.

**Communication Proficiency**

In order to meet graduation requirements, all students must earn an average of C (2.0) or better in ENGL 150 and ENGL 250, with neither grade being lower than a C-. Students not meeting this condition must earn a C or better in an advanced writing course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 220</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 302</td>
<td>3</td>
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<tr>
<td>ENGL 309</td>
<td>3</td>
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<tr>
<td>ENGL 314</td>
<td>3</td>
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**U.S. Diversity and International Perspectives**

In order to meet graduation requirements, all students must complete 3 cr. of course work in U.S. Diversity and 3 cr. in International Perspectives. See university approved list.

**General Education: Minimum of 38.5 credits required**

**Physical and Life Sciences: 8 cr. min required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 255 Fundamentals of Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 255L Fundamentals of Human Anatomy Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 256 Fundamentals of Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 256L Fundamentals of Human Physiology Laboratory</td>
<td>1</td>
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**Additional option-specific requirements are:**

**Community and Public Health**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 211 Principles of Biology I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 211L Principles of Biology Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 163 College Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 163L Laboratory in College Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>MICRO 201 Introduction to Microbiology</td>
<td>2</td>
</tr>
<tr>
<td>MICRO 201L Introductory Microbiology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>FS HN 167 Introduction to Human Nutrition</td>
<td>3</td>
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</table>

**Exercise Science**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHYS 111 General Physics</td>
<td>4-5</td>
</tr>
<tr>
<td>or PHYS 115 Physics for the Life Sciences</td>
<td>4-5</td>
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</tbody>
</table>

**Physical Education Teacher Education**

<table>
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<tr>
<td>PHYS 111 General Physics</td>
<td>4-5</td>
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<tr>
<td>or PHYS 115 Physics for the Life Sciences</td>
<td>5</td>
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</table>

**Pre-Health Professions**

<table>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 111 General Physiology</td>
<td>5</td>
</tr>
</tbody>
</table>

**Mathematics and Statistics: 2 cr. min required**

**Option-specific requirements are:**

**Community and Public Health**

From the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 101 Principles of Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or STAT 104 Introduction to Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or STAT 226 Introduction to Business Statistics I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Exercise Science**

From the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 140 College Algebra</td>
<td>2-3</td>
</tr>
<tr>
<td>or MATH 141 Trigonometry</td>
<td></td>
</tr>
<tr>
<td>or MATH 142 Trigonometry and Analytic Geometry</td>
<td>1</td>
</tr>
<tr>
<td>or MATH 165 Calculus I</td>
<td>1</td>
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</tbody>
</table>

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<td>or STAT 104 Introduction to Statistics</td>
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</tr>
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<td>or STAT 226 Introduction to Business Statistics I</td>
<td>3</td>
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</tbody>
</table>

**Physical Education Teacher Education**

One of the following:

<table>
<thead>
<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>MATH 104 Introduction to Probability and Matrices</td>
<td>2-3</td>
</tr>
<tr>
<td>or MATH 140 College Algebra</td>
<td></td>
</tr>
<tr>
<td>or MATH 141 Trigonometry</td>
<td></td>
</tr>
<tr>
<td>or MATH 142 Trigonometry and Analytic Geometry</td>
<td>1</td>
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</tbody>
</table>
or MATH 150  Discrete Mathematics for Business and Social Sciences
or MATH 165  Calculus I

Pre-Health Professions

<table>
<thead>
<tr>
<th>One of the following:</th>
<th>3-4</th>
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</thead>
<tbody>
<tr>
<td>MATH 142  Trigonometry and Analytic Geometry</td>
<td></td>
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<tr>
<td>or MATH 165  Calculus I</td>
<td></td>
</tr>
<tr>
<td>or MATH 181  Calculus and Mathematical Modelling for the Life Sciences</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>One of the following:</th>
<th>3-4</th>
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<tr>
<td>STAT 101  Principles of Statistics</td>
<td></td>
</tr>
<tr>
<td>or STAT 104  Introduction to Statistics</td>
<td></td>
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<tr>
<td>or STAT 226  Introduction to Business Statistics</td>
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</tbody>
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Social Sciences: 9 cr. min required

Option-specific requirements are:

Community and Public Health

| HD FS 102  Individual and Family Life Development | 3 |
| or PSYCH 230  Developmental Psychology |

Exercise Science

| PSYCH 101  Introduction to Psychology | 3 |
| or PSYCH 230  Developmental Psychology |
| SOC 134  Introduction to Sociology | 3 |

Physical Education Teacher Education

| PSYCH 230  Developmental Psychology | 3 |
| or SOC 134  Introduction to Sociology | 3 |

Pre-Health Professions

| PSYCH 101  Introduction to Psychology | 3 |
| or PSYCH 230  Developmental Psychology |
| SOC 134  Introduction to Sociology | 3 |

Humanities: 6 cr. min required

Choose from department approved list.

Communications: 12.5 cr. min required

| ENGL 150  Critical Thinking and Communication | 3 |
| ENGL 250  Written, Oral, Visual, and Electronic Composition | 3 |
| SP CM 212  Fundamentals of Public Speaking | 3 |
| LIB 160  Information Literacy | 1 |

One of the following: 3

| ENGL 302  Business Communication |
| or ENGL 314  Technical Communication |
| or SP CM 312  Business and Professional Speaking |

Program requirements:

The following courses are required in all majors and options:

| KIN 252  Disciplines and Professions in Kinesiology and Health | 1 |
| KIN 253  Orientation in Kinesiology and Health |
| KIN 258  Physical Fitness and Conditioning |
| KIN 358  Physiology of Exercise (*) |
| H S 350  Human Diseases (*) | 3 |

* A grade of C- or better is required.

Total cr. required: A minimum of 124 credits is required, with a minimum of 46 credits in courses numbered 300 or above.

Courses for Kinesiology and Health Major

Option 1. Community and Public Health

This option prepares students for careers in health promotion and disease prevention. Students are prepared for work in state and local health agencies, community and government programs, hospitals, industry, and not-for-profit organizations. Graduates are eligible to take the Certified Health Education Specialist (CHES) exam.

Option Requirements:

| H S 105  First Aid and Emergency Care | 2 |
| H S 215  Drug Education | 3 |
| H S 310  Community and Public Health (*) | 3 |
| H S 380  Worksite Health Promotion | 3 |
| H S 385  Strategies for Professional School and Field Experience Opportunities |
| H S 390  Administration of the School Health Program | 3 |
| H S 430  Community Health Program Development | 3 |
| H S 485  Directed Field Experience in Health Promotion (take 10-16 credits) |
| HD FS 449  Program Evaluation and Proposal Writing | 3 |
| JL MC 220  Principles of Public Relations | 3 |
| or JL MC 305  Publicity Methods |
| KIN 366  Exercise Psychology (*) | 3 |

One of the following:

| ENGL 309  Report and Proposal Writing |
| ENGL 313  Rhetorical Website Design |
| HD FS 395  Children, Families, and Public Policy |
| JL MC 342  Visual Principles for Mass Communicators |

Electives: 11.5-18.5 credits

* A grade of C- or better is required.

Option 2. Exercise Science

This option prepares students for careers in exercise/fitness promotion. Students are prepared as health/fitness specialists, personal trainers, strength and conditioning specialists, and health coaches. Students find work in fitness centers, worksite health programs, medical facilities, cardiac rehabilitation centers, and other agencies that provide fitness services. Students are eligible to sit for certification exams offered by the American College of Sports Medicine and the National Strength & Conditioning Association.

Option Requirements:

| KIN 259  Leadership Techniques for Fitness Programs | 2 |
| KIN 266  Advanced Strength Training and Conditioning |
| KIN 345  Management of Health-Fitness Programs and Facilities | 3 |
| KIN 355  Biomechanics (*) | 3 |
| KIN 360  Sociology of Sport and Exercise (*) | 3 |
| KIN 366  Exercise Psychology (*) | 3 |
| KIN 372  Motor Control and Learning Across the Lifespan (*) | 3 |
| KIN 385  Strategies for Professional School and Field Experience Opportunities |
| KIN 458  Principles of Fitness Assessment and Exercise Prescription (*) | 4 |
| KIN 459  Internship in Exercise Leadership | 1 |
| KIN 462  Medical Aspects of Exercise | 3 |
| KIN 485A  Internship in Exercise Science: Health/Fitness Management. (take 8 to 16 crs) |
| H S 380  Worksite Health Promotion | 3 |
| A TR 220  Basic Athletic Training | 2 |

Electives: 16.5-25.5 credits

Total Credits 33-48

* A grade of C- or better is required.

Option 3. Physical Education Teacher Education

This option is for students seeking a license to teach K-12 physical education. All courses required for licensure have a minimum grade requirement of a C or C-.

Students interested in a coaching and/or a health endorsement must complete additional coursework.

Option Requirements:

| KIN 230  Fundamentals of Aquatics | 1 |
| KIN 231  Fundamentals of Tumbling and Gymnastics | 1 |
KIN 238 Fundamentals of Outdoor and Adventure Activities 1
KIN 232 Fundamentals of Indoor Team Sports 1
or KIN 233 Fundamentals of Outdoor Team Sports
KIN 235 Fundamentals of Racquet Sports 1
or KIN 236 Fundamentals of Individual Sports
KIN 280 Directed Field Experience in Elementary Physical Education 1
KIN 281 Directed Field Experience in Physical Education 1
KIN 312 Movement Education in Elementary School Physical Education 3
KIN 355 Biomechanics 3
KIN 360 Sociology of Sport and Exercise 3
KIN 365 Sport Psychology 3
or KIN 366 Exercise Psychology 3
KIN 372 Motor Control and Learning Across the Lifespan 3
KIN 313 Secondary Physical Education Methods 3
KIN 395 Adapted Physical Education 3
KIN 417 Supervised Teaching in Physical Education in the Secondary School 3
†
KIN 418 Supervised Teaching in Physical Education in the Elementary School 8
KIN 471 Measurement in Physical Education 3
KIN 475 Physical Education Curriculum Design and Program Organization 3
DANCE 211 Fundamentals and Methods of Social and World Dance 2
H S 105 First Aid and Emergency Care 2
H S 305 Instructor's First Aid and Cardio-pulmonary Resuscitation 2
C I 202 Learning Technologies in the 7-12 Classroom 3
C I 204 Social Foundations of Education in the United States 3
C I 406 Multicultural Foundations of School and Society: Introduction 3
Electives: 3.5 credits
† Arranged with instructor.

Option 4. Pre-Health Professions
This option is for students interested in graduate study or for those who are preparing for professional programs in medicine, physical therapy, occupational therapy, and other healthcare professions. Course work provides background in human movement while completing the requirements for entry into graduate or professional school.

Option Requirements:
KIN 355 Biomechanics (*) 3
KIN 360 Sociology of Sport and Exercise (*) 3
KIN 365 Sport Psychology (*) 3
or KIN 366 Exercise Psychology 3
KIN 372 Motor Control and Learning Across the Lifespan (*) 3
KIN 385 Strategies for Professional School and Field Experience Opportunities 3
9 cr. from the following 9
KIN 455 Research Topics in Biomechanics
KIN 458 Principles of Fitness Assessment and Exercise Prescription
KIN 462 Medical Aspects of Exercise
KIN 467 Exercise and Health: Behavior Change
KIN 472 Neural Basis of Human Movement
KIN 480 Functional Anatomy
KIN 481 Biomechanics Lab
KIN 482 Exercise Physiology Lab
KIN 483 Exercise Psychology Lab
KIN 484 Assessment and Control of Locomotion
KIN 495 Seminar in Exercise and Sport Science
Specialization Requirements: Sciences as required by professional schools. 26 credits
Electives: 17.5-18.5 credits
† A grade of C- or better is required.

Minors

Athletic Coaching
The minor requires a minimum of 17 credits and may be earned by completing the following:
A TR 220 Basic Athletic Training 2
KIN 315 Coaching Theory and Administrative Issues 3
KIN 365 Sport Psychology 3
BIOL 155 Human Biology 3
or BIOL 255 Fundamentals of Human Anatomy 3
PSYCH 230 Developmental Psychology 3
3 cr. from the following 3
KIN 355 Biomechanics
KIN 358 Physiology of Exercise

Dance
The minor requires a minimum of 21 credits and may be earned by completing the following:
DANCE 220 Modern Dance Composition 2
DANCE 222 Modern Dance II 1
DANCE 270 Dance Appreciation 3
DANCE 320 Sound and Movement 3
DANCE 360 History and Philosophy of Dance 3
DANCE 384 Teaching Children's Dance 2
DANCE 385 Methods of Teaching Dance 2
DANCE 386 Teaching Dance Technique and Composition 2
3 additional credits selected from dance courses numbered 200 or above.*
* Participation in Orchesis I or II is recommended.

Exercise Science
The minor requires a minimum of 17 credits and may be earned by completing the following:
KIN 258 Physical Fitness and Conditioning 2
KIN 358 Physiology of Exercise 3
KIN 366 Exercise Psychology 3
3-6 cr. from the following 3-6
A TR 220 Basic Athletic Training 2
KIN 259 Leadership Techniques for Fitness Programs
KIN 266 Advanced Strength Training and Conditioning
KIN 345 Management of Health-Fitness Programs and Facilities
KIN 360 Sociology of Sport and Exercise 3
3-6 cr. from the following 3-6
KIN 458 Principles of Fitness Assessment and Exercise Prescription 3
KIN 462 Medical Aspects of Exercise
KIN 467 Exercise and Health: Behavior Change
Total Credits 16-22

Health promotion
The minor requires a minimum of 18 credits and may be earned by completing the following:
H S 110 Personal and Consumer Health 3
H S 350 Human Diseases 3
H S 380 Worksite Health Promotion 3
3-6 cr. from the following 3
H S 215 Drug Education
H S 305 Instructor's First Aid and Cardio-pulmonary Resuscitation
Kinesiology

The minor requires a minimum of 15 credits and may be earned by completing the following: (For non-majors only.)

- KIN 355 Biomechanics 3
- KIN 358 Physiology of Exercise 3
- KIN 360 Sociology of Sport and Exercise 3
- KIN 372 Motor Control and Learning Across the Lifespan 3
- KIN 365 Sport Psychology 3
- or KIN 366 Exercise Psychology 3

Sport and Recreation

The minor requires a minimum of 18 credits and may be earned by completing the following:

- KIN 365 Sport Psychology 3
- KIN 360 Sociology of Sport and Exercise 3
- KIN 399 Recreational Sport Management 3
- MGMT 370 Management of Organizations 3

3 cr. from the following

- ADVRT 230 Advertising Principles
- HRI 260 Global Tourism Management
- JL MC 220 Principles of Public Relations
- JL MC 305 Publicity Methods
- MGMT 310 Entrepreneurship and Innovation
- MGMT 313 Feasibility Analysis and Business Planning
- MGMT 371 Organizational Behavior
- MGMT 471 Personnel and Human Resource Management

Courses primarily for undergraduates:

(0-3) Cr. 1. F. Prereq: Permission of Athletic Training Program Director
Athletic training clinical experiences designed to review human anatomical structures including origin, insertion, action, innervations of muscles. Students will gain experience with palpation of these structures to help identify location of anatomical landmarks. Students will also gain experience identifying bones, ligaments, and tendons. Open to athletic training students only.

A TR 220. Basic Athletic Training.
(1-2) Cr. 2. Prereq: BIOL 155 or BIOL 255 and BIOL 256
Introduction to methods of prevention and immediate care of athletic injuries. Basic information concerning health supervision of athletes, and some basic wrapping and strapping techniques for common injuries. Non A TR majors only.

A TR 221. Pre-Athletic Training Clinical Practicum.
(0-3) Cr. 1. S. Prereq: Credit or enrollment in KIN 222 and permission of athletic training program director
Athletic training clinical observation experiences to accompany 222. Utilize knowledge to evaluate, analyze and demonstrate appropriate taping, wrapping and basic skill techniques. Open to students interested in the athletic training option. Offered on a satisfactory-fail basis only.

A TR 222. Basic Athletic Training for Athletic Trainers.
(2-2) Cr. 3. S. Prereq: BIOL 255, BIOL 255L
Provides pre-athletic training students with the knowledge of the profession of a certified athletic trainer, factors associated with injury prevention, treatment, emergency care of athletic injuries, protective equipment, basic organization, administrative, and legal concepts in the athletic training setting. To be taken concurrently with 221.

(0-3) Cr. 1. F. Prereq: Permission of Athletic Training Program Director
Athletic training clinical experiences for athletic training students during pre-season intercollegiate football. Clinical experiences include: Professional Rescuer CPR, AED certification, emergency splinting and spineboarding, medical record keeping and HIPPA regulations, environmental conditions, prevention of injury screening strategies, athletic training room and education program policies and procedures, review of athletic taping techniques, acute injury management, mouthpiece formation, and anatomy review. Offered on a satisfactory-fail basis only.

A TR 224. Evaluation of Athletic Injuries I.
(2-3) Cr. 3. F. Prereq: Permission of athletic training program director
Sport injury assessment procedures and evaluation techniques for lower body injuries. Includes an overview of mechanisms of injury, general musculoskeletal disorders, and spine or neurological dysfunction. Designed for students in the athletic training major.

(0-3) Cr. 1. F. Prereq: Permission of athletic training program director
Athletic training clinical experience to accompany 224. Open to students in the athletic training major. Offered on a satisfactory-fail basis only.

A TR 226. Evaluation of Athletic Injuries II.
(2-3) Cr. 3. S. Prereq: Permission of athletic training program director
Sport injury assessment procedures and evaluation techniques for lower body injuries. Includes an overview of common illnesses of athletes and sport specific injuries. Designed for students in the athletic training major.

A TR 227. Athletic Injuries II Clinical Practicum.
(0-3) Cr. 1. S. Prereq: Permission of athletic training program director
Athletic training clinical experience to accompany 226. Open to students in the athletic training major. Offered on a satisfactory-fail basis only.

A TR 240. Introduction to Taping, Equipment, and Bracing Techniques.
(0-3) Cr. 1. S. Prereq: Permission of athletic training program director
Basic information and laboratory instruction regarding basic taping techniques, athletic equipment fitting procedures, and the use and proper fitting of prophylactic braces. Open to students in the athletic training major. Offered on a satisfactory-fail basis only.

A TR 322. Therapeutic Modalities for Athletic Trainers.
(2-2) Cr. 3. F. Prereq: Permission of athletic training program director
Theory and technique of therapeutic modalities used in the management of injuries.

A TR 323. Therapeutic Modalities for Athletic Trainers.
(0-3) Cr. 1. F. Prereq: Permission of athletic training program director
Theoretical and clinical application of rehabilitation principles used in the management of athletic injuries.

A TR 326. Rehabilitation of Athletic Injuries.
(2-2) Cr. 3. S. Prereq: Permission of athletic training program director
Theoretical and practical application of rehabilitation principles used in the management of athletic injuries.

(3-0) Cr. 3. F. Prereq: Permission of athletic training program director, senior classification
Current administrative, professional, and legal issues pertaining to athletic training. Job search techniques and strategies including preparation of materials for athletic training students.

A TR 450. Medical Concerns for the Athletic Trainer.
(3-0) Cr. 3. F. Prereq: Permission of athletic training program director
Current medical issues and concerns, including pathology of illness and injury, dermatological conditions, exposure to allied health care professionals, and pharmacological indications in relation to the profession of athletic training and patient/athlete care.

A TR 488. Evidence Based Medicine Discussion in Athletic Training.
Cr. 2. S. Prereq: Permission of athletic training program director
Clinical experiences in application of athletic training techniques under supervision of certified athletic trainers. Participation in monthly research journal discussion. Offered on a satisfactory-fail basis only.
DANCE 130. Ballet I. (0-3) Cr. 1. F.S.
Introduction to the basic skills, vocabulary, and tradition of ballet with concentration on control and proper alignment. No previous ballet experience required. Offered on a satisfactory-fail basis only.

DANCE 140. Jazz I. (0-3) Cr. 1. F.
Introduction to the modern jazz style with concentration on isolation and syncopation. No previous jazz experience required. Offered on a satisfactory-fail basis only.

DANCE 150. Tap Dance I. (0-3) Cr. 1. F.
Instruction and practice in basic tap technique and terminology. No previous tap experience required. Offered on a satisfactory-fail basis only.

DANCE 160. Ballroom Dance I. (0-2) Cr. 1. F.S.
Instruction and practice in foxtrot, waltz, swing, cha cha, rhumba, tango, and selected contemporary dances. Offered on a satisfactory-fail basis only.

DANCE 199. Dance Continuum. Cr. 0.5-2. Repeatable, maximum of 6 credits. F.S. Prereq: Permission of instructor Advance registration required. Continued instruction and practice in either modern dance, recreational dance, ballet, jazz and/or compositional skills. Offered on a satisfactory-fail basis only.

DANCE 211. Fundamentals and Methods of Social and World Dance. (1-3) Cr. 2. S.
Skill enhancement, teaching, progressions with emphasis on world and social dance. Designed for kinesiology and health majors, open to others.

DANCE 220. Modern Dance Composition. (1-3) Cr. 2. F. Prereq: DANCE 120 or previous modern dance experience Theory and practice of the creative skills involved in solo and small group composition.

DANCE 222. Modern Dance II. (0-3) Cr. 1. F. Prereq: DANCE 120 or previous modern dance experience Dance techniques emphasizing strength, balance, endurance, rhythmic activity and extended combinations.

DANCE 223. Modern Dance III. (0-3) Cr. 1. S. Prereq: DANCE 222 Continued experience in dance techniques and extended combinations. Emphasis on maturation of skill and artistry. Exposure to a variety of modern dance technical styles.

DANCE 224. Concert and Theatre Dance. (Cross-listed with THTRE). (0-3) Cr. 0.5-2. Repeatable, maximum of 6 credits. F.S. Prereq: By audition only Choreography, rehearsal, and performance in campus dance concerts and/or musical theatre productions. Offered on a satisfactory-fail basis only.

DANCE 232. Ballet II. (0-3) Cr. 1. S. Prereq: Previous ballet experience Technical skills in the classical movement vocabulary. Emphasis on alignment, techniques, sequence development, and performing quality.

DANCE 233. Ballet III. (0-3) Cr. 1. F. Prereq: DANCE 230 Concentration on technical proficiency at the intermediate level. Pointe work and partnering opportunities available.

DANCE 242. Jazz II. (0-3) Cr. 1. S. Prereq: Previous jazz dance experience Dance concepts within the jazz idiom. Instruction in extended movement sequences and artistic interpretation.

DANCE 270. Dance Appreciation. (3-0) Cr. 3. F.S.S.
Introduction to the many forms and functions of dance in world cultures. Develop abilities to distinguish and analyze various dance styles. No dance experience required.

DANCE 320. Sound and Movement. (2-2) Cr. 3. S. Prereq: DANCE 220 Intermediate composition based on the relationship of movement to improvised sounds, rhythmic scores, and the musical works of composers from various periods.

DANCE 360. History and Philosophy of Dance. (3-0) Cr. 3. Alt. S., offered 2012. Prereq: DANCE 270 Study of the history of dance from early to modern times with emphasis on the theories and philosophies of contemporary modern dance, dancers, and dance educators.

DANCE 370. Advanced Studies in Dance. Cr. 1-3. Repeatable, maximum of 8 credits. F.S. Prereq: 2 credits in dance Advance registration required. Designed to meet special interests and talents of students to include both group and independent study in various aspects of dance as a performing art including production, choreography, and performance.

DANCE 384. Teaching Children's Dance. (1-3) Cr. 2. S.
Content, experiences, and methods of a comprehensive dance program at the elementary school level. Theories and practice in guiding elementary school children in expressive movement experiences.

DANCE 385. Methods of Teaching Dance. (1-3) Cr. 2. F.
Methods and techniques of teaching social and world dance forms. Introduction to teaching educational modern dance.

DANCE 386. Teaching Dance Technique and Composition. (1-3) Cr. 2. Prereq: DANCE 320 Teaching of dance as an expressive art form with emphasis on technique, rhythm, and the creative teaching process.

DANCE 490. Independent Study. Cr. 1-3. Repeatable, maximum of 6 credits. Prereq: 6 credits in dance and permission of coordinator Independent study of problems or areas of interest in dance.

DANCE 490A. Independent Study: Dance. Cr. 1-3. Repeatable, maximum of 6 credits. F.S. Prereq: 6 credits in dance and permission of coordinator Independent study of problems or areas of interest in dance.

DANCE 490H. Independent Study in Dance - Honors. Cr. 1-3. Repeatable, maximum of 6 credits. F.S. Prereq: 6 credits in dance and permission of coordinator Independent study of problems or areas of interest in dance for those admitted to the honors program.

Courses primarily for undergraduates:
H S 105. First Aid and Emergency Care. (1-2) Cr. 2. F.S.
Discussion and application of the basic techniques of administering first aid and cardiopulmonary resuscitation. ARC certification available.

H S 110. Personal and Consumer Health. (3-0) Cr. 3. F.S.
Physical, mental, and social aspects of health as a basis for understanding and preventing health problems. False and misleading advertising and effects of cultists and faddists on consumer health. Study of legislation and agencies concerned with consumer protection and health insurance.

H S 215. Drug Education. (3-0) Cr. 3. F.S. Prereq: PSYCH 101 or PSYCH 230 Use and abuse of mood modifying substances in contemporary society. Includes study of tobacco, alcohol, and other drugs.
(3-0) Cr. 3. F.S. Prereq: HD FS 102 or HD FS 226
An overview of school health services, healthful school living, and health
instruction for teachers at the elementary level. Credit for both H S 275 and 375
may not be applied toward graduation.

H S 305. Instructor’s First Aid and Cardiopulmonary Resuscitation.
(1-2) Cr. 2. F.S. Prereq: H S 105, current Standard First Aid and Community CPR
Certification
Discussion and practice of skills needed to teach first aid and cardiopulmonary resuscitation. ARC certification available.

(3-0) Cr. 3. F.S.SS. Prereq: H S 110
Introduction to community health problems, programs of prevention, environmental health agencies, and health services. Study of local, state, and
national community health agencies, their purposes and functions.

H S 350. Human Diseases.
(3-0) Cr. 3. F.S.SS. Prereq: H S 110 and BIOL 255, BIOL 256
Discussion of disease process and ill-health in the twentieth century. Emphasis on
epidemiology, prevention, treatment, and the understanding of the etiology of
communicable and noncommunicable diseases.

H S 375. Teaching-Learning Process in Health Education.
(3-0) Cr. 3. F.S. Prereq: H S 105, H S 110, H S 215
Principles, methods, materials, and resources involved in the teaching of health.
Includes organization and development of the health education curriculum (K-12).
Credit for both H S 275 and 375 may not be applied toward graduation.

H S 380. Worksite Health Promotion.
(3-0) Cr. 3. F.S. Prereq: KIN 258, KIN 366
The design and implementation of worksite health promotion programs and the
benefits these programs have for both employees and employers. Review of
various health risk appraisals and planning theory-based incentive programs
designed to promote positive lifestyles.

H S 385. Strategies for Professional School and Field Experience
Opportunities.
(Cross-listed with KIN). Cr. R. F.S. Prereq: Junior classification; to be taken
minimum of two semesters prior to graduation or field experience placement.
Search techniques and preparation of relevant material for work and/or
professional school admission. Information specifically related to health care and
kinesiology fields. Field experience process and procedures will be reviewed.

H S 390. Administration of the School Health Program.
(3-0) Cr. 3. F. Prereq: H S 310
History and legal basis of school health programs. Procedures for developing,
organizing, administering, and evaluating a modern program of health services,
healthful school living, and health instruction. Includes administration, community
and school relationships.

Cr. 12. F.S. Prereq: H S 375
Advance registration required.

H S 417A. Supervised Teaching in Health Education in the Secondary
School: Initial Endorsement.
Cr. 14. F.S. Prereq: H S 375
Students must be fully admitted to Teacher Education and must apply for approval
to enroll at the beginning of the semester prior to registering.

H S 417B. Supervised Teaching in Health Education in the Secondary
School: Additional Endorsement.
Cr. arr. F.S. Prereq: H S 375
Students must be fully admitted to Teacher Education and must apply for approval
to enroll at the beginning of the semester prior to registering.

H S 430. Community Health Program Development.
(3-0) Cr. 3. F. Prereq: H S 380
Techniques of needs assessment, program design, administration, and evaluation
of community health education programs in various settings.

H S 485. Directed Field Experience in Health Promotion.
Cr. 1-16. Prereq: All required health studies courses and permission of coordinator
Advance registration required. Supervised experience in health promotion field.
Offered on a satisfactory-fail basis only.

H S 490. Independent Study.
Cr. 1-3. Repeatable, maximum of 6 credits. Prereq: 6 credits in health studies and
permission of coordinator

Courses primarily for undergraduates:

KIN 101. Swimming I.
(0-3) Cr. 1. F.S.SS.
Basic course for nonswimmers. Emphasis on two fundamental strokes and
personal water safety skills. Offered on a satisfactory-fail basis only.

KIN 102. Swimming II.
(0-3) Cr. 1. F.S. Prereq: KIN 101 or equivalent skill
Intermediate course. Emphasis on learning and improving five basic strokes and
personal water safety skills. Offered on a satisfactory-fail basis only.

KIN 108. Aquatic Fitness.
(0-3) Cr. 1. F.S. Prereq: KIN 102 or equivalent skill
Water related exercises, activities, and swimming workouts to improve physical
fitness. Offered on a satisfactory-fail basis only.

KIN 114. Lifeguard Training.
(0-3) Cr. 1. F.S. Prereq: Ability to swim 500 yards continuously of front crawl,
sidestroke, and breaststroke; perform a standing and surface dive; swim under
water; and tread water for one minute. Minimum age 16
Course follows specifications by American Red Cross. Offered on a satisfactory-
fail basis only.

KIN 122. Badminton.
(0-2) Cr. 1. F.S.SS.
Introduction to fundamental badminton skills and strategic game play. Offered on
a satisfactory-fail basis only.

KIN 126. Pocket Billiards.
(0-2) Cr. 1. F.S.SS.
Introduction to the basic strokes (stop, draw, follow) and contemporary game
forms associated with pocket billiards. Offered on a satisfactory-fail basis only.

KIN 129. Bowling.
(0-2) Cr. 1. F.S.SS.
Introduction to bowling skills and strategic game play. Offered on a satisfactory-fail
basis only.

KIN 135. Golf.
(0-2) Cr. 1. F.S.SS.
Introduction to fundamental golf skills and strategic game play. Offered on a
satisfactory-fail basis only.

KIN 144. Racquetball.
(0-2) Cr. 1. F.S.SS.
Introduction to fundamental racquetball skills and strategic game play. Offered on
a satisfactory-fail basis only.

KIN 153. Ice Skating.
(0-2) Cr. 1. F.S.SS.
Introduction to fundamental ice skating skills and strategic game play. Offered on
a satisfactory-fail basis only.

KIN 158. Tennis.
(0-2) Cr. 1. F.S.SS.
Introduction to basic skills (forehand, backhand, service) and basic knowledge of
game play. Offered on a satisfactory-fail basis only.

KIN 163. Physical Fitness.
(0-3) Cr. 1. F.S.SS.
Evaluation of fitness status. Exercises, activities, and programs to improve
physical fitness. Improve physical fitness and weight control. Offered on a
satisfactory-fail basis only. Credit for only KIN 163 or 258 may be applied toward
graduation.

KIN 164. Walking for Fitness.
(0-3) Cr. 1. F.S.SS.
Fitness walking as an activity to improve health and fitness; values of this type of
activity as a lifetime endeavor with knowledge and usage of pedometers. Offered on
a satisfactory-fail basis only.

KIN 166. Weight Training.
(0-3) Cr. 1. F.S.SS.
Introduction to fundamental skills of weight training and strategic game play.
Offered on a satisfactory-fail basis only.
KIN 170. Tae Kwon Do/Karate I.
(0-2) Cr. 1. F.S.
Teaches fundamentals of self-defense, focusing on hand and foot striking and blocking techniques. The physical skills will be taught focused on training through development of courtesy, integrity, perseverance, self-control and indomitable spirit. It will be emphasized that each student learns a way of life that promotes personal development, physical health and citizenship. Offered on a satisfactory-fail basis only.

KIN 171. Tae Kwon Do/Karate II.
(0-2) Cr. 1. F.S.
Teaches advanced application of self-defense focusing on hand and foot striking and blocking techniques. The physical skills will be taught focused on training through development of courtesy, integrity, perseverance, self-control and indomitable spirit. It will be emphasized that each student learns a way of life that promotes personal development, physical health and citizenship. Offered on a satisfactory-fail basis only.

(0-2) Cr. 1. F.S.
Teaches fundamentals of self-defense focusing on joint locks, pressure points and throwing techniques to escape from an attacker. The physical skills will be taught focused on training through development of courtesy, integrity, perseverance, self-control and indomitable spirit. It will be emphasized that each student learns a way of life that promotes personal development, physical health & citizenship. Offered on a satisfactory-fail basis only.

KIN 182. Volleyball.
(0-2) Cr. 1. F.S.SS.
Introduction to fundamental volleyball skills and strategic game play. Offered on a satisfactory-fail basis only.

KIN 185. Soccer.
(0-2) Cr. 1. F.S.SS.
Introduction to fundamental soccer skills and strategic game play. Offered on a satisfactory-fail basis only.

(0-3) Cr. 1. S. Prereq: KIN 101 or equivalent. Eligibility for admission to KIN teacher education program
Basic water safety and emergency water safety. Skill enhancement, understanding, and progressions.

KIN 231. Fundamentals of Tumbling and Gymnastics.
(0-3) Cr. 1. F. Prereq: Eligibility for admission to KIN teacher education program

KIN 232. Fundamentals of Indoor Team Sports.
(0-3) Cr. 1. S. Prereq: Eligibility for admission to KIN teacher education program
Fundamentals of indoor team sports, for example basketball, volleyball, team handball. Skill enhancement, analysis, understanding practice and the development of progressions.

(0-3) Cr. 1. F. Prereq: Eligibility for admission to KIN teacher education program
Fundamentals of outdoor team sports, for example flag football, soccer, softball. Skill enhancement, analysis, understanding practice and the development of progressions.

(0-3) Cr. 1. S. Prereq: Eligibility for admission to KIN teacher education program
Fundamentals of racquet sports, for example tennis, badminton, racquetball. Skill enhancement, analysis, understanding practice and the development of progressions.

(0-3) Cr. 1. F. Prereq: Eligibility for admission to KIN teacher education program
Fundamentals of individual sports, for example track and field, golf, archery and bowling. Skill enhancement, analysis, understanding practice and the development of progressions.

KIN 238. Fundamentals of Outdoor and Adventure Activities.
(0-3) Cr. 1. F. Prereq: Eligibility for admission to KIN teacher education program
Techniques of individual and group facilitation for initiatives involving outdoor adventure activity. Topics include ropes/challenge course events, activity presentation, and sequencing, safety techniques, preparation principles and new games philosophy. Participation is required in one weekend of fieldwork.

KIN 252. Disciplines and Professions in Kinesiology and Health.
(1-0) Cr. 1. F.S.
Overview of the various disciplines and professions that comprise the field of Kinesiology (the study of human movement) and help students determine the career option that best fits their interests.

KIN 253. Orientation in Kinesiology and Health.
(1-0) Cr. 1. F.S. Prereq: Concurrent enrollment or credit in KIN 252
Overview of ISU policies and procedures, academic advising operations, degree requirements, program of study planning, and campus resources. Kinesiology and Health majors only. Offered on a satisfactory-fail basis only.

KIN 254. Learning Communities in Kinesiology/Health.
(0.5-0) Cr. 0.5. F.S. Prereq: Concurrent enrollment or credit in KIN 253
Semester long course for new students in the Kinesiology Learning Community to be taken concurrently with the general orientation class for Kinesiology majors. Students will take field trips and work with faculty, staff and mentors to explore careers in kinesiology and complete assignments related to identification & development of their skills and interests. Kinesiology and health majors only. Offered on a satisfactory-fail basis only.

KIN 256. Physical Fitness and Conditioning.
(1-3) Cr. 2. F.S. Prereq: Kinesiology and health majors only
Development of personal fitness using a variety of conditioning and exercise techniques such as aerobics, weight training, and aquatic fitness. Introduction to acute and chronic responses to exercise, and the role of exercise in health promotion and weight management. Credit for only one of the following courses may be applied toward graduation: KIN 163, 258.

KIN 259. Leadership Techniques for Fitness Programs.
(1-3) Cr. 2. F.S. Prereq: KIN 258
Development of exercise leadership skills for a variety of activities. Includes planning, promotion, and teaching techniques for developing fitness in others using a variety of exercise modalities including aerobics, weight training, and aquatic fitness. Kinesiology and health majors only.

KIN 266. Advanced Strength Training and Conditioning.
(1-2) Cr. 2. F.S. Prereq: KIN 258
This course is designed to enhance the student's current level of knowledge and expertise to an advanced level in the area of strength training and conditioning. The course will prepare students interested in taking the National Strength and Conditioning Association Certified and Conditioning Specialist’s exam. The course will focus on the assessment and implementation of training programs with strong emphasis on the areas of resistance training, metabolic training, flexibility, reaction time, speed, and agility. Kinesiology and health majors only and permission of instructor needed.

KIN 280. Directed Field Experience in Elementary Physical Education.
(0-3) Cr. 1. F.S.
Observing, planning, and facilitating movement experiences of children in an elementary school setting. Offered on a satisfactory-fail basis only.

KIN 281. Directed Field Experience in Physical Education.
(0-3) Cr. 1. F. Prereq: Admission to University Teacher Education Program
Observing, planning, and facilitating movement experiences of students in a public school setting. Offered on a satisfactory-fail basis only.

KIN 284. Elementary and Pre-school Movement Education.
(2-3) Cr. 3. F.S.SS. Prereq: 3 credits in human development and family studies Approaches to teaching movement skills to pre-school and elementary school age children. Emphasis on planning and conducting developmentally appropriate movement experiences for preschool and elementary aged children based upon motor development research. Practical experience provided. Credit in only one of the following courses may be applied toward graduation: KIN 284, 312.

KIN 285. Pre-Internship in Kinesiology.
Cr. 1-2. F.S.SS. Prereq: Kinesiology and Health major and permission of internship coordinator
Pre-internship experience with a fitness organization. Offered on a satisfactory-fail basis only.

KIN 312. Movement Education in Elementary School Physical Education.
(2-3) Cr. 3. F. Prereq: Concurrent enrollment in KIN 260
Planning for management and instruction of developmentally appropriate physical education for children pre-school through elementary grade 6. Laboratory experience required. Credit for only one in the following courses can be applied toward graduation: KIN 284, 312.
KIN 313. Secondary Physical Education Methods. 
(2-3) Cr. 3. S. Prereq: admission to University Teacher Education Program. 
Current theory, practice and research on teaching focusing on management, 
instructional, and learning styles of students in secondary schools.

(3-0) Cr. 3. F.S. 
Study in the theory, ethics, strategy, and mechanics of coaching various 
interscholastic and/or intercollegiate sports. Emphasis on formulating a 
philosophy, identifying goals and psychological aspects, teaching skills, and 
developing strategies.

KIN 345. Management of Health-Fitness Programs and Facilities. 
(3-0) Cr. 3. F.S. 
Application of management concepts to the fitness industry, e.g., understanding 
customers, marketing, program management, financial management, legal issues, 
and evaluation and planning.

KIN 355. Biomechanics. 
(3-0) Cr. 3. F.S.SS. Prereq: PHYS 111 or PHYS 115 
Mechanical basis of human performance; application of mechanical principles to 
exercise, sport and other physical activities. Nonmajor graduate credit.

KIN 356. Physiology of Exercise. 
(3-0) Cr. 3. F.S.SS. Prereq: BIOL 255, BIOL 255L, BIOL 256 and BIOL 256L 
Physiological basis of human performance; effects of physical activity on body 
functions. Nonmajor graduate credit.

KIN 360. Sociology of Sport and Exercise. 
(3-0) Cr. 3. F.S. Prereq: SOC 134 and one of STAT 101, STAT 104 or STAT 226/ 
STAT 326; or KIN 471 
Sport and exercise as social systems and as institutions related to other 
institutions such as the polity, the economy, mass media, and education. 
Nonmajor graduate credit.

KIN 365. Sport Psychology. 
(3-0) Cr. 3. F.S. Prereq: PSYCH 101 or PSYCH 230 
Psychological factors that influence performance in sport settings. The influence 
of personality, anxiety, motivation, social factors, and psychological skills training. 
Nonmajor graduate credit.

KIN 366. Exercise Psychology. 
(3-0) Cr. 3. F.S.SS. Prereq: PSYCH 101 or PSYCH 230 
Psychological theories for understanding and predicting health-oriented 
exercise behavior. Psychological and psychobiological responses to exercise, 
Psychological interventions for increasing exercise participation and adherence 
rates. Nonmajor graduate credit.

KIN 372. Motor Control and Learning Across the Lifespan. 
(3-0) Cr. 3. F.S.SS. Prereq: PSYCH 101 or PSYCH 230, BIOL 255, BIOL 256 
Introduction to major concepts of neuromotor control, behavioral motor control 
and motor learning in the child, adult and older adult, with emphasis on the adult 
system. Nonmajor graduate credit.

KIN 385. Strategies for Professional School and Field Experience 
Opportunities. 
(Cross-listed with H S). Cr. R. F. S. Prereq: Junior classification; to be taken 
minimum of two semesters prior to graduation or field experience placement. 
Search techniques and preparation of relevant material for work and/or 
professional school admission. Information specifically related to health care and 
kinesiology fields. Field experience process and procedures will be reviewed.

KIN 395. Adapted Physical Education. 
(Dual-listed with KIN 595). (2-3) Cr. 3. F. Prereq: KIN 312 
Specific disabling conditions in terms of etiology, characteristics, needs, and 
potential for movement experiences. Techniques of assessment, prescription, 
adaptation of activities, methods, and program planning. Laboratory experience 
required. KIN 595 may not be taken by students who have previously earned 
credit in KIN 395

KIN 399. Recreational Sport Management. 
(3-0) Cr. 3. F. Prereq: SOC 134 
The role of sport in developing fitness, recreational opportunities, and tourism, 
with special emphasis on issues related to youth sport, volunteerism, and the 
marketing of sport events and facilities.

KIN 417. Supervised Teaching in Physical Education in the Secondary 
School. 
Cr. arr. F. S. Prereq: KIN 281, KIN 313, KIN 355, KIN 358, KIN 395, KIN 471, KIN 
475; admission to Teacher Education; approval before enrolling in the course. 
Supervised teaching in the secondary schools.

KIN 418. Supervised Teaching in Physical Education in the Elementary 
School. 
Cr. 8. F. S. Prereq: KIN 280, KIN 312, KIN 355, KIN 358, KIN 395, KIN 471, KIN 
475; Students must be fully admitted to Teacher Education and must apply for 
approval to enroll at the beginning of the semester prior to registering 
Supervised teaching in the elementary schools.

KIN 445. Legal Aspects of Sport. 
(3-0) Cr. 3. S. 
Students will understand legal concepts and terminology relevant to sport/activity, 
identify strategies for limiting liability in sport/fitness programs, and identify 
solutions for elimination of discriminatory practices in sport and physical activity.

KIN 455. Research Topics in Biomechanics. 
(3-0) Cr. 3. Prereq: KIN 355 or permission of instructor 
Examination of biomechanics and kinesiology research literature to evaluate 
the application of mechanical principles and analyses to human movement 
in exercise, sport, physical activity, and activities of daily living and to assess 
research outcomes and their implications for motor performance, movement 
energetic, musculoskeletal loading, and injury.

KIN 458. Principles of Fitness Assessment and Exercise Prescription. 
(3-2) Cr. 4. F.S. Prereq: KIN 388 
Physiological principles of physical fitness; design and administration of fitness 
programs; testing, evaluation, and prescription; cardiac risk factor modification.

KIN 459. Internship in Exercise Leadership. 
(0-3) Cr. 1. Prereq: C- or better in KIN 299, CPR certification, concurrent 
enrollment in KIN 458 
Observation and practice of exercise leadership techniques in an on-campus adult 
fitness program.

KIN 462. Medical Aspects of Exercise. 
(3-0) Cr. 3. F.S. Prereq: KIN 388 
The role of exercise in preventive medicine. Impact of exercise on various 
diseases, and the effect of various medical conditions on the ability to participate 
in vigorous exercise and competitive sports. Principles of exercise testing and 
prescription for individuals with these conditions. Environmental and nutritional 
aspects of exercise. Nonmajor graduate credit.

KIN 467. Exercise and Health: Behavior Change. 
(Dual-listed with KIN 567). (3-0) Cr. 3. S. Prereq: Introductory course with 
emphasis on exercise psychology (i.e., KIN 366 or equivalent) 
Advanced analysis of theoretical health behavior models and their application to 
physical activity behavior. Includes practical techniques, tools and interventions 
(e.g., counseling skills, motivational interviewing) to enhance exercise prescription 
and motivation, and considerations for working with special populations.

KIN 471. Measurement in Physical Education. 
(Dual-listed with KIN 571). (3-0) Cr. 3. S. 
Study of grading, assessment and evaluation in physical education with a focus on 
measuring cognitive and psycho-motor achievement.

KIN 472. Neural Basis of Human Movement. 
(Dual-listed with KIN 572). (3-0) Cr. 3. S. Prereq: KIN 372 or PSYCH 310 
Addresses the role of the central nervous system in the control of voluntary human 
movement, with the focus on the cerebral cortex, basal ganglia and cerebellum. 
Content organized around specific nervous system damage (such as stroke, 
apraxia, spasticity, or spinal cord damage) and functional movements (such as 
reaching and grasping, balance and gait). Converging evidence from human 
movement disorders, brain imaging, animal lesion and single cell studies provide 
the primary basis for the content. Nonmajor graduate credit.

KIN 475. Physical Education Curriculum Design and Program Organization. 
(Dual-listed with KIN 575). (3-0) Cr. 3. F. Prereq: Admission to University Teacher 
Education Program 
Current theory, practices and principles applied to curriculum development for 
programs in physical education, K-12. Organizing for teaching in a variety of 
school settings.

KIN 480. Functional Anatomy. 
(3-0) Cr. 3. F.S. Prereq: KIN 385; BIOL 155 or BIOL 255 and BIOL 256 
The structure and function of human muscular, skeletal and nervous systems. 
The relationship of these systems to efficient and safe human motion. Nonmajor 
graduate credit.

KIN 481. Biomechanics Lab. 
(0-2) Cr. 1. Prereq: KIN 355 
Learning lab techniques in Biomechanics and engaging in the experimental 
process.
KIN 482. Exercise Physiology Lab.  
(0-2) Cr. 1. Prereq: KIN 358  
Learning lab techniques in Exercise Physiology and engaging in the experimental process.

KIN 483. Exercise Psychology Lab.  
(0-2) Cr. 1. Prereq: KIN 366  
Learning lab techniques in Exercise Psychology and engaging in the experimental process.

KIN 484. Assessment and Control of Locomotion.  
(0-2) Cr. 1. Prereq: KIN 372  
Learning lab techniques in Motor Control and engaging in the experimental process.

KIN 485. Internship in Exercise Science.  
Cr. 1-16. Prereq: Senior classification and advance registration  
Observation and practice in fitness agencies. Offered on a satisfactory-fail basis only.

KIN 485A. Internship in Exercise Science: Health/Fitness Management.  
Cr. 1-16. Prereq: Prereq: C- or better in KIN 458 and KIN 499, Kinesiology and Health majors only. Cumulative GPA 2.0.  
Observation and practice in selected sport and exercise science agencies. Offered on a satisfactory-fail basis only.

KIN 485B. Internship in Exercise Science: Sport and Physical Activity.  
Cr. 1-16. Prereq: Prereq: Kinesiology and Health majors only. Cumulative GPA 2.0.  
Observation and practice in selected sport and exercise science agencies. Offered on a satisfactory-fail basis only.

KIN 490. Independent Study.  
Cr. 1-3. Repeatable, maximum of 6 credits. Prereq: 6 credits from KIN advanced core and permission of coordinator  
Independent study of problems of areas of interest in exercise and sport science and related areas.

KIN 490A. Independent Study: Exercise and Sport Science.  
Cr. 1-3. Repeatable, maximum of 6 credits. Prereq: 6 credits from KIN advanced core and permission of coordinator  
Independent study of problems of areas of interest in exercise and sport science and related areas.

KIN 490H. Independent Study: Honors.  
Cr. 1-2. Repeatable, maximum of 4 credits. Prereq: 6 credits from KIN advanced core and permission of coordinator  
Independent study of problems of areas of interest in exercise and sport science and related areas.

KIN 495. Seminar in Exercise and Sport Science.  
Cr. 0.5-1. Prereq: Senior classification  
Offered on a satisfactory-fail basis only.

Courses primarily for graduate students, open to qualified undergraduates:

(3-0) Cr. 3. Repeatable. Prereq: Graduate classification in kinesiology and health Methods and techniques used in the design and interpretation of research involving physical activity. Emphasis on styles of writing, library use, and computer applications.

KIN 505. Research Laboratory Techniques in Exercise Physiology.  
(0-4) Cr. 2. Prereq: KIN 358 or equivalent course with basic laboratory experience  
Application and use of laboratory research equipment in exercise physiology, including operation, calibration, and use in selected situations.

KIN 510. Advanced Medical Aspects of Exercise.  
(2-0) Cr. 2. Prereq: KIN 358  
The role of exercise in preventive medicine. Impact of exercise on various diseases, and the effect of various medical conditions on the ability to participate in vigorous exercise and competitive sports. Principles of exercise testing and prescription for individuals with these conditions.

KIN 512. Movement Education in Elementary School Physical Education.  
(3-0) Cr. 3. F.  
Study of learning and teaching in physical education for elementary schools.

KIN 516. Quantitative Analysis of Human Movement.  
(3-1) Cr. 3. Prereq: KIN 355  
Application of the principles of mechanics to the analysis of human motion. Investigation of the effects of kinematics and kinetics on the human body with special emphasis on exercise and sport applications. Includes consideration of two-dimensional and three-dimensional imaging techniques and force measurements.

KIN 517. Musculoskeletal Modeling.  
(3-1) Cr. 3. F. Prereq: KIN 355 or permission from instructor  
Systematic problem-solving approaches and design of computer programs for biomechanical analyses. Estimation of anthropometric parameters and mechanical properties of muscles, bones, and joints. Integration of anthropometrics, kinematics, and muscle mechanics into simulations of human movement.

KIN 518. Student Teaching in Elementary Physical Education.  
(0-8) Cr. 8. F.S. Prereq: KIN 512, KIN 570, KIN 575  
Student teaching for 8 weeks in an elementary school.

KIN 519. Student Teaching in Secondary Physical Education.  
(0-8) Cr. 8. F.S. Prereq: KIN 512, KIN 570, KIN 575  
Student teaching for 8 weeks in a middle or high school.

KIN 520. The Social Analysis of Sport.  
(3-0) Cr. 3. Prereq: KIN 360; open to majors only or by permission of instructor  
Sociological analysis of sport with emphasis on sociological theory, sports structure, and function in modern industrialized society; the systems of sport in regard to their role structure; formal organization, and professionalization and its differentiation along social class, age, and sex.

KIN 521. Advanced Topics in Exercise and Sport Psychology.  
(3-0) Cr. 3. Prereq: KIN 365 or KIN 366; 3 courses in psychology; open to majors only or by permission of instructor  
Aspects of psychology which form a basis for understanding and explaining behavior in the context of exercise and sport. Emphasis on evaluating published research, particularly theory and research methodology. Student presentations.

KIN 549. Advanced Vertebrate Physiology I.  
(Cross-listed with AN S, NUTRS). (4-0) Cr. 4. F. Prereq: Biol 335; credit or enrollment in BBMB 404 or BBMB 420  
Overview of mammalian physiology. Cell biology, endocrinology, cardiovascular, respiratory, immune, digestive, skeletal muscle and reproductive systems.

KIN 550. Advanced Physiology of Exercise I.  
(2-3) Cr. 3. Prereq: KIN 505  
Concepts and methods of assessing neurological, muscular, cardiovascular, and respiratory adjustments to exercise.

KIN 551. Advanced Physiology of Exercise II.  
(2-3) Cr. 3. Prereq: KIN 505  
Analysis of factors affecting work capacity and performance. Human energy metabolism concepts and measurement.

KIN 552. Advanced Vertebrate Physiology II.  
(Cross-listed with AN S, NUTRS). (3-0) Cr. 3. S. Prereq: Biol 335; credit or enrollment in BBMB 404 or BBMB 420  
Cardiovascular, renal, respiratory, and digestive physiology.

KIN 558. Physical Fitness - Principles, Programs and Evaluation.  
(2-3) Cr. 3. Prereq: KIN 358  
Physiological principles of physical fitness, design and administration of fitness programs; testing, evaluation, and prescription; electrocardiogram interpretation.

(2-3) Cr. 3. Prereq: KIN 372  
Theoretical perspectives of motor control and learning will be examined as well as factors that facilitate motor learning. Motor control and learning will also be addressed by studying functional tasks such as reach and grasp, posture and locomotor, handwriting, catching and/or speech.

(2-0) Cr. 2-3. Prereq: PSYCH 230  
Addresses theories and underlying mechanisms of motor development and motor control applied to typically and atypically developing children. Developmental control of balance, locomotion, reach-to-grasp, and other functional skills will be discussed, as well as the role of physical activity in a child’s life.
KIN 567. Exercise and Health: Behavior Change. (Dual-listed with KIN 467). (3-0) Cr. 3. S. Prereq: Introductory course with emphasis on exercise psychology (i.e., KIN 366 or equivalent) Advanced analysis of theoretical health behavior models and their application to physical activity behavior. Includes practical techniques, tools and interventions (e.g., counseling skills, motivational interviewing) to enhance exercise prescription and motivation, and considerations for working with special populations.

KIN 570. Physical Activity Assessment for Health Related Research. (2-2) Cr. 3. This course will cover the broad scope of research in physical activity and public health. Emphasis will be placed on the application of physical activity assessment techniques since accurate measures are needed to more accurately assess the health benefits from physical activity and to evaluate the effectiveness of behavioral interventions designed to promote physical activity.

KIN 571. Measurement in Physical Education. (Dual-listed with KIN 471). (3-0) Cr. 3. S. Study of grading, assessment and evaluation in physical education with a focus on measuring cognitive and psycho-motor achievement.

KIN 572. Neural Basis of Human Movement. (Dual-listed with KIN 472). (3-0) Cr. 3. Prereq: KIN 372 or PSYCH 310 Addresses the role of the central nervous system in the control of voluntary human movement, with the focus on the cerebral cortex, basal ganglia and cerebellum. Content organized around specific nervous system damage (such as stroke, apraxia, spasticity, or spinal cord damage) and functional movements (such as reaching and grasping, balance and gait). Converging evidence from human movement disorders, brain imaging, animal lesion and single cell studies provide the primary basis for the content.

KIN 575. Physical Education Curriculum Design and Program Organization. (Dual-listed with KIN 475). (3-0) Cr. 3. F. Current theory, practices and principles applied to curriculum development for programs in physical education, K-12. Organizing for teaching in a variety of school settings.


KIN 590A. Special Topics: Physical Education. Cr. 1-3. Repeatable.


KIN 591. Supervised Field Experience. Cr. 1-6. Prereq: 10 graduate credits in kinesiology and/or related areas Supervised on-the-job field experience in special areas.

KIN 591A. Supervised Field Experience: Physical Education. Cr. 1-6. Prereq: 10 graduate credits in kinesiology and/or related areas Supervised on-the-job field experience in special areas.

KIN 591B. Supervised Field Experience: Health and Exercise Promotion. Cr. 1-6. Prereq: 10 graduate credits in kinesiology and/or related areas Supervised on-the-job field experience in special areas.

KIN 591D. Supervised Field Experience: Exercise Physiology. Cr. 1-6. Prereq: 10 graduate credits in kinesiology and/or related areas Supervised on-the-job field experience in special areas.

KIN 592. Practicum in College Teaching. Cr. 1-3. Repeatable, maximum of 3 credits. F.S.SS. Supervised experience with teaching an upper division, classroom-based course. Offered on a satisfactory-fail basis only.

KIN 595. Adapted Physical Education. (Dual-listed with KIN 395). (2-3) Cr. 3. F. Prereq: KIN 375 Specific disabling conditions in terms of etiology, characteristics, needs, and potential for movement experiences. Techniques of assessment, prescription, adaptation of activities, methods, and program planning. Laboratory experience required. KIN 595 may not be taken by students who have previously earned credit in KIN 395.


Courses for graduate students:


KIN 620. Advance Research Methods in Physical Activity. (3-0) Cr. 3. S. Prereq: KIN 501, STAT 401 and STAT 402. Doctoral students only Culminating seminar designed to synthesize statistical and design courses with practical research issues using data from physical activity.


KIN 695. Adapted Physical Education.