

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 Bachelor of Science degree in Kinesiology & Health. The undergraduate curriculum major/option is comprised of three components: general education, required departmental courses and the major/option 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 Kinesiology & Health

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

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

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 or private organizations that seek to promote health in the population.

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/fitness facilities, clinics, or hospitals. Graduates are able to plan, implement and supervise exercise programs which will improve fitness and health. Graduates also have a basic understanding of management issues related to business applications in the health and fitness field.

Students in the **Physical Activity and Health Promotion** option are prepared for careers focused on health and physical activity. This option provides more emphasis on behavioral and psychological aspects of physical activity. Students are prepared for careers in community based settings, including work sites, schools, hospitals, and other community agencies.

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.

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, physician assistant or other healthcare professions.

Learning outcomes for the undergraduate degree

Despite the diversity of options, the learning outcomes comprise a common framework for each student as they progress 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:**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), and the Department of Kinesiology. 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.

More information can be found at: <http://www.fshn.hs.iastate.edu/undergraduate-programs/diet-exercise/>

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 School of Education, Teacher Education. More information can be found at: <http://www.kin.hs.iastate.edu/>

Endorsement to teach health education

Those interested in teaching health education in the public schools may get a primary licensure 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, fitness, martial arts, and sports. These courses are designed to serve general education purposes for all students.

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 (Physical Education Teacher Education) 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: Performing Arts to find Performing Arts Major, Emphasis in Dance.

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 (<http://www.istatesportsmed.com>) for course requirements. Admission procedures and technical standards can be found at <http://www.kin.hs.iastate.edu/programs/athletic-training/#program-information-and-requirements>.

Curriculum in Kinesiology and Health

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

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

Minors in dance, exercise science, health promotion, and kinesiology, are available; see requirements under Kinesiology, Undergraduate Programs.

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

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 the ENGL 150 grade being no lower than a C- and the ENGL 250 grade no lower than a C. Students not meeting this condition must earn a C or better in an advanced writing course:

ENGL 302	Business Communication	3
or ENGL 314	Technical Communication	
LIB 160	Information Literacy	1
SP CM 212	Fundamentals of Public Speaking	3

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:

Physical and Life Sciences:

BIOL 255	Fundamentals of Human Anatomy	3
BIOL 255L	Fundamentals of Human Anatomy Laboratory	1
BIOL 256	Fundamentals of Human Physiology	3
BIOL 256L	Fundamentals of Human Physiology Laboratory	1

Additional option-specific requirements are:

Community and Public Health

BIOL 211	Principles of Biology I	3
BIOL 211L	Principles of Biology Laboratory I	1
CHEM 163	College Chemistry	4
CHEM 163L	Laboratory in College Chemistry	1
FS HN 167	Introduction to Human Nutrition	3
MICRO 201	Introduction to Microbiology	2
MICRO 201L	Introductory Microbiology Laboratory	1

Exercise Science

FS HN 167	Introduction to Human Nutrition	3
PHYS 115	Physics for the Life Sciences	4

Physical Activity and Health Promotion

BIOL 211	Principles of Biology I	3
BIOL 211L	Principles of Biology Laboratory I	1
CHEM 163	College Chemistry	4
CHEM 163L	Laboratory in College Chemistry	1
FS HN 167	Introduction to Human Nutrition	3
MICRO 201	Introduction to Microbiology	2
MICRO 201L	Introductory Microbiology Laboratory	1

Physical Education Teacher Education

PHYS 115	Physics for the Life Sciences	4
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Pre-Health Professions

PHYS 111	General Physics	4-5
or PHYS 115	Physics for the Life Sciences	

Mathematics and Statistics:

Community and Public Health

From the following: 3-4

STAT 101	Principles of Statistics
or STAT 104	Introduction to Statistics

Exercise Science

From the following: 3-4

MATH 140	College Algebra
or MATH 14	Preparation for Calculus
or MATH 14	Applied Trigonometry
or MATH 16	Calculus I

From the following: 3-4

STAT 101	Principles of Statistics
or STAT 104	Introduction to Statistics

Physical Activity and Health Promotion

One of the following: 3-4

STAT 101	Principles of Statistics
or STAT 104	Introduction to Statistics

Physical Education Teacher Education

One of the following: 3-4

MATH 104	Introduction to Probability
or MATH 14	College Algebra
or STAT 101	Principles of Statistics
or STAT 104	Introduction to Statistics

Pre-Health Professions

One of the following: 3-4

MATH 140	College Algebra
or MATH 14	Preparation for Calculus
or MATH 14	Applied Trigonometry
or MATH 16	Calculus I

From the following: 3-4

STAT 101	Principles of Statistics
or STAT 104	Introduction to Statistics

Social Sciences: 9 cr. min required

Option-specific requirements are:

Community and Public Health

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

Exercise Science

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

Physical Activity and Health Promotion

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
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: 13 cr. min required

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
LIB 160	Information Literacy	1
SP CM 212	Fundamentals of Public Speaking	3
One of the following		3
ENGL 302	Business Communication	
or ENGL 314	Technical Communication	
or SP CM 31	Business and Professional Speaking	

Program requirements:

The following courses are required in all majors and options:

H S 110	Personal and Consumer Health	3
H S 350	Human Diseases (*)	3
KIN 252	Disciplines and Professions in Kinesiology and Health	1
KIN 253	Orientation and Learning Community in Kinesiology and Health	1
KIN 258	Principles of Physical Fitness and Conditioning	2
KIN 358	Physiology of Exercise (*)	3
KIN 359	Exercise Physiology Lab	1

* A grade of C- or better is required.

Total cr. required to graduate: 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 a diverse array of careers in public and private health agencies as well as local, state and federal government programs. Students are qualified for careers in a variety of health and human service agencies, community organizations, and hospitals. This option also provides the ideal background training for credentials as a Certified Health Education Specialist (CHES).

Option Requirements:

P R 220	Principles of Public Relations	3
or P R 305	Publicity Methods	
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 385	Preparation and Search Strategies for Kinesiology and Health Internships	0.5
H S 430	Community Health Program Development	3
H S 464	Physical Activity Epidemiology	3
or VDPAM 428	Principles of Epidemiology and Population Health	
H S 485	Internship in Health Studies	8-16
HD FS 270	Family Communications and Relationships	3
HD FS 449	Program Evaluation and Proposal Writing	3
or ENGL 309	Proposal and Report Writing	
PSYCH 485	Health Psychology	3
One of the following		
HD FS 377	Aging and the Family	3
or HD FS 395	Children, Families, and Public Policy	

Electives: 6-14 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	3
KIN 266	Advanced Strength Training and Conditioning	2
KIN 345	Management of Health-Fitness Programs and Facilities	3
KIN 355	Biomechanics (*)	3
KIN 360	Sociology of Physical Activity and Health (*)	3
KIN 366	Exercise Psychology (*)	3
KIN 372	Motor Control and Learning Across the Lifespan (*)	3
KIN 385	Preparation and Search Strategies for Kinesiology and Health Internships	0.5

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	8-16
H S 380	Worksite Health Promotion	3
A TR 220	Basic Athletic Training	2
or H S 305	Instructor's First Aid and Cardio-pulmonary Resuscitation	
Electives: 12-21 credits		

* A grade of C- or better is required.

Option 3. Physical Activity and Health Promotion

This option prepares students for a variety of career outlets focused on health and physical activity promotion. The coursework provides the ideal background for students interested in worksite wellness programming. Students are also well suited to pursue career opportunities in health coaching and health promotion in schools, community agencies, as well as clinical settings. This option provides ideal background training for students interested in pursuing the Physical Activity in Public Health Specialist Certification offered by the American College of Sports Medicine.

Option Requirements:

FS HN 364	Nutrition and Prevention of Chronic Disease	3
FS HN 365	Obesity and Weight Management	3
or FS HN 366	Communicating Nutrition Messages	
H S 310	Community and Public Health (*)	3
H S 380	Worksite Health Promotion	3
H S 385	Preparation and Search Strategies for Kinesiology and Health Internships	0.5
H S 430	Community Health Program Development	3
H S 464	Physical Activity Epidemiology	3
H S 485	Internship in Health Studies	8-16
KIN 259	Leadership Techniques for Fitness Programs	3
KIN 366	Exercise Psychology (*)	3
KIN 458	Principles of Fitness Assessment and Exercise Prescription (*)	4
KIN 467	Exercise and Health: Behavior Change	3
Electives: 9-18 credits		

* A grade of C- or better is required.

Option 4. 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 231	Fundamentals of Tumbling and Gymnastics (*)	1
KIN 232	Fundamentals of Team Sports (*)	1
KIN 236	Fundamentals of Individual Sports and Fitness (*)	1
KIN 259	Leadership Techniques for Fitness Programs	3
KIN 280	Directed Field Experience in Elementary Physical Education	1
KIN 281	Directed Field Experience in Secondary Physical Education	1
KIN 282	Field Experience with Educational Outreach	1
KIN 312	Movement Education in Elementary School Physical Education (**)	3
KIN 313	Teaching Secondary Physical Education (**)	3
KIN 355	Biomechanics (*)	3
KIN 360	Sociology of Physical Activity and Health (*)	3
KIN 365	Sport Psychology (*)	3
or KIN 366	Exercise Psychology	
KIN 372	Motor Control and Learning Across the Lifespan (*)	3
KIN 395	Adapted Physical Education (**)	3
KIN 417	Supervised Teaching in Physical Education in the Secondary School (**)	8
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 (*)	1
EDUC 202	Educational Technologies in the 7-12 Classroom	3
EDUC 204	Social Foundations of Education in the United States: Secondary	3
EDUC 406	Social Justice Education and Teaching: Secondary	3
H S 105	First Aid and Emergency Care (*)	2
H S 305	Instructor's First Aid and Cardio-pulmonary Resuscitation (*)	2
Electives: 5 credits		

* A grade of C- or better is required.

** A grade of C or better is required.

Option 5. 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, physician assistant, and other healthcare professions. Course work provides background in human movement while completing the requirements for entry into graduate or professional school.

Option Requirements:

BIOL 211	Principles of Biology I	3
BIOL 211L	Principles of Biology Laboratory I	1
BIOL 212	Principles of Biology II	3
BIOL 212L	Principles of Biology Laboratory II	1
KIN 242	Planning for Success in a Health Career	0.5
KIN 355	Biomechanics (*)	3
KIN 360	Sociology of Physical Activity and Health (*)	3
KIN 365	Sport Psychology (*)	3
or KIN 366	Exercise Psychology (*)	
KIN 372	Motor Control and Learning Across the Lifespan (*)	3
9 cr. from the following		9
H S 464	Physical Activity Epidemiology	3
KIN 455	Research Topics in Biomechanics	3
KIN 458	Principles of Fitness Assessment and Exercise Prescription	4
KIN 462	Medical Aspects of Exercise	3
KIN 467	Exercise and Health: Behavior Change	3
KIN 472	Neural Basis of Human Movement	3
KIN 473	Physical Dimensions of Aging	3
KIN 480	Functional Anatomy	3

Specialization Requirements: Other prerequisites as required by professional schools.

Electives: 6-14 credits

* A grade of C- or better is required.

Minors

Dance

The minor requires a minimum of 19 credits and may be earned by completing the following:

DANCE 220	Modern Dance Composition	2
DANCE 222/223	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

or DANCE 386 Teaching Dance Technique and Composition

3 additional credits selected from dance courses numbered 200 or above.*

*Participation in Orchestras I or II is recommended.

Exercise Science

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

KIN 258	Principles of Physical Fitness and Conditioning	2
KIN 358	Physiology of Exercise	3
KIN 359	Exercise Physiology Lab	1
KIN 366	Exercise Psychology	3
KIN 458	Principles of Fitness Assessment and Exercise Prescription	4

5 cr. from the following

A TR 220	Basic Athletic Training	
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 Physical Activity and Health	
KIN 462	Medical Aspects of Exercise	
KIN 467	Exercise and Health: Behavior Change	

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

H S 215	Drug Education	
H S 305	Instructor's First Aid and Cardio-pulmonary Resuscitation	
H S 310	Community and Public Health	

3-6 cr. from the following

H S 430	Community Health Program Development	
KIN 467	Exercise and Health: Behavior Change	

Kinesiology

The minor requires a minimum of 16 credits and may be earned by completing the following: (For non-majors only)

KIN 355	Biomechanics	3
KIN 358	Physiology of Exercise	3

KIN 359	Exercise Physiology Lab	1
KIN 360	Sociology of Physical Activity and Health	3
KIN 372	Motor Control and Learning Across the Lifespan	3
KIN 365	Sport Psychology	3
or KIN 366	Exercise Psychology	

Gerontology

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

FOUR YEAR PLANS

Students must complete a 3-credit course in US diversity and a 3-credit course in international perspectives. Check the ISU homepage for a list of approved courses. You must complete a minimum of 46 credits in 300/400 level courses and a total of 124 credits for graduation. Four year plans are arranged with courses in prerequisite sequence and within the term a course is usually offered. These are SAMPLE plans - use the degree audit as "official" documentation of progress toward your degree.

Kinesiology and Health, B.S. - Community/Public Health

Freshman

Fall	Credits	Spring	Credits
BIOL 211	3	CHEM 163	4
BIOL 211L	1	CHEM 163L	1
ENGL 150	3	FS HN 167	3
H S 110	3	H S 105	2
KIN 252	1	KIN 258	2
KIN 253	1	PSYCH 230	3
LIB 160	1	Elective	1
PSYCH 101	3		
	16		16

Sophomore

Fall	Credits	Spring	Credits
BIOL 255	3	BIOL 256	3
BIOL 255L	1	BIOL 256L	1
ENGL 250	3	H S 215	3
HD FS 270	3	SP CM 212	3
SOC 134	3	Electives	3
STAT 101 or 104	3-4	Humanities Choice	3
	16-17		16

Junior

Fall	Credits	Spring	Credits
H S 310	3	H S 385	0.5
H S 350	3	H S 464 or VDPAM 428	3
HD FS 377 or 395	3	HD FS 449 or ENGL 309	3

KIN 358	3	MICRO 201	2
KIN 359	1	MICRO 201L	1
Humanities Choice	3	PSYCH 485	3
		Electives	4
	16		16.5

Senior

Fall	Credits	Spring	Credits
ENGL 302, 314 or SP CM 312	3	H S 485	8-16
H S 430	3		
P R 220 or 305	3		
Electives (300+ Level Courses)	6		
	15		8-16

Kinesiology and Health, B.S. - Exercise Science

Freshman

Fall	Credits	Spring	Credits
ENGL 150	3	FS HN 167	3
H S 110	3	KIN 258	2
KIN 252	1	MATH 140, 143, 145 or 165	3-4
KIN 253	1	SOC 134	3
LIB 160	1	SP CM 212	3
PSYCH 101 or 230	3	Electives	2
Humanities Choice	3		
	15		16-17

Sophomore

Fall	Credits	Spring	Credits
BIOL 255	3	A TR 220 or H S 305	2
BIOL 255L	1	BIOL 256	3
ENGL 250	3	BIOL 256L	1
KIN 259	3	KIN 266	2
Electives	3	STAT 101 or 104	3-4
Social Science Choice	3	Electives	5
	16		16-17

Junior

Fall	Credits	Spring	Credits
H S 350	3	KIN 355	3
KIN 345	3	KIN 360	3
KIN 358	3	KIN 372	3
KIN 359	1	KIN 385	0.5
KIN 366	3	Electives	5
PHYS 115	4	Humanities Choice	3
	17		17.5

Senior		
Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 KIN 485A	8-16
H S 380	3	
KIN 458	4	
KIN 459	1	
KIN 462	3	
Electives	3	
17		8-16

Kinesiology and Health, B.S. - Physical Activity and Health Promotion

Freshman		
Fall	Credits Spring	Credits
BIOL 211	3 CHEM 163	4
BIOL 211L	1 CHEM 163L	1
ENGL 150	3 FS HN 167	3
H S 110	3 KIN 258	2
KIN 252	1 SOC 134	3
KIN 253	1 Humanities Choice	3
LIB 160	1	
PSYCH 101 or 230	3	
16		16

Sophomore		
Fall	Credits Spring	Credits
BIOL 255	3 BIOL 256	3
BIOL 255L	1 BIOL 256L	1
ENGL 250	3 SP CM 212	3
KIN 259	3 STAT 101 or 104	3-4
MICRO 201	2 Electives	3
MICRO 201L	1 Social Science Choice	3
Humanities Choice	3	
16		16-17

Junior		
Fall	Credits Spring	Credits
FS HN 364	3 FS HN 365 or 366	3
H S 310	3 H S 380	3
H S 350	3 H S 385	0.5
KIN 358	3 H S 464	3
KIN 359	1 Electives	6
KIN 366	3	
Elective	1	
17		15.5

Senior		
Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 H S 485	8-16
H S 430	3	
KIN 458	4	
KIN 467	3	
Electives	3	
16		8-16

Kinesiology and Health, B.S. - Physical Education Teacher Education

Freshman		
Fall	Credits Spring	Credits
EDUC 204	3 DANCE 211	1
ENGL 150	3 KIN 236	1
H S 110	3 KIN 258	2
KIN 252	1 KIN 280	1
KIN 253	1 MATH 104, 140, STAT 101, or STAT 104	3-4
LIB 160	1 SOC 134	3
PSYCH 230	3 Humanities (International Perspective)	3
15		14-15

Sophomore		
Fall	Credits Spring	Credits
BIOL 255	3 BIOL 256	3
BIOL 255L	1 BIOL 256L	1
ENGL 250	3 EDUC 202	3
H S 105	2 H S 305	2
KIN 231	1 KIN 282	1
KIN 232	1 SP CM 212	3
KIN 259	3 Humanities (American History)	3
KIN 281	1	
15		16

Junior		
Fall	Credits Spring	Credits
KIN 312	3 ENGL 302, 314, or SPCM 312	3
KIN 360	3 H S 350	3
KIN 372	3 KIN 313	3
PHYS 115	4 KIN 358	3
Electives	3 KIN 359	1

	KIN 471	Credits
	16	16
Senior		
Fall	Credits Spring	Credits
EDUC 406	3 KIN 417	8
KIN 355	3 KIN 418	8
KIN 365 or 366	3	
KIN 395	3	
KIN 475	3	
	15	16

Kinesiology and Health, B.S. - Pre-Health Professions - Chiropractic

Freshman

Fall	Credits Spring	Credits
BIOL 211	3 BIOL 212	3
BIOL 211L	1 BIOL 212L	1
CHEM 177	4 CHEM 178	3
CHEM 177L	1 CHEM 178L	1
ENGL 150	3 H S 110	3
KIN 252	1 MATH 140, 143, 145 or 165	3-4
KIN 253	1 Elective	1
LIB 160	1	
	15	15-16

Sophomore

Fall	Credits Spring	Credits
BIOL 255 & 255L	4 BIOL 256 & 256L	4
CHEM 331	3 CHEM 332 & 332L or BBMB 301	3-4
CHEM 331L	1 KIN 242	0.5
ENGL 250	3 SOC 134	3
KIN 258	2 SP CM 212	3
PSYCH 101 or 230	3 Humanities Choice	3
	16	16.5-17.5

Junior

Fall	Credits Spring	Credits
KIN 366 or 365	3 H S 350	3
KIN 372	3 KIN 355	3
PHYS 111	5 KIN 360	3
STAT 101 or 104	3-4 PHIL 331	3
Social Science Choice	3 Electives	3
	17-18	15

Senior

Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses *	9
FS HN 367	1 Electives	6
KIN 358	3	
KIN 359	1	
Elective	1	
Electives (300+ Level Courses)	3	
Humanities Choice	3	
	15	15

* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 467, 472, 473, 480, H S 464.

Kinesiology and Health, B.S. - Pre-Health Professions - Dentistry

Freshman

Fall	Credits Spring	Credits
BIOL 211	3 BIOL 212	3
BIOL 211L	1 BIOL 212L	1
CHEM 177	4 CHEM 178	3
CHEM 177L	1 CHEM 178L	1
ENGL 150	3 H S 110	3
KIN 252	1 MATH (Trig or Calc) 143, 145 or 165	3-4
KIN 253	1	
LIB 160	1	
	15	14-15

Sophomore

Fall	Credits Spring	Credits
BIOL 255 & 255L	4 BIOL 256 & 256L	4
CHEM 331	3 CHEM 332	3
CHEM 331L	1 CHEM 332L	1
ENGL 250	3 KIN 242	0.5
KIN 258	2 SOC 134	3
PSYCH 101 or 230	3 STAT 101 or 104	3-4
	16	14.5-15.5

Junior

Fall	Credits Spring	Credits
BBMB 404	3 H S 350	3
KIN 366 or 365	3 KIN 355	3
KIN 372	3 PHYS 112	5
PHYS 111	5 Electives	3

SP CM 212	3 Humanities Choice	3
		17
Senior		
Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 BIOL 313, 314, 328, 335, 350 or BBMB 405	3-4
KIN 358	3 Electives (300+ Level Courses)	3
KIN 359	1 KIN 400 Level Courses*	9
KIN 360	3	
Humanities Choice	3	
Social Science Choice	3	
		15-16

* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 467, 472, 473, 480, H S 464.

Kinesiology and Health, B.S. - Pre-Health Professions - Human Medicine (Pharmacy)

Freshman

Fall	Credits Spring	Credits
BIOL 211	3 BIOL 212	3
BIOL 211L	1 BIOL 212L	1
CHEM 177	4 CHEM 178	3
CHEM 177L	1 CHEM 178L	1
ENGL 150	3 H S 110	3
KIN 252	1 MATH 165	4
KIN 253	1	
LIB 160	1	
		15

Sophomore

Fall	Credits Spring	Credits
BIOL 255 & 255L	4 BIOL 256 & 256L	4
CHEM 331	3 CHEM 332	3
CHEM 331L	1 CHEM 332L	1
ENGL 250	3 KIN 242	0.5
KIN 258	2 SOC 134	3
PSYCH 101 or 230	3 STAT 101 or 104	3-4
		14.5-15.5

Junior

Fall	Credits Spring	Credits
BBMB 404	3 BIOL 313, 314, 328, 335, 350, or BBMB 405	3-4
KIN 366 or 365	3 H S 350	3

KIN 372	3 KIN 355	3
PHYS 111	5 PHYS 112	5
SP CM 212	3 Humanities Choice	3-4
		17-19
Senior		
Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses*	9
KIN 358	3 Elective (300+ Level Course)	1
KIN 359	1 Electives	3
KIN 360	3 Humanities Choice	3
Elective	1	
Social Sciences Choice	3	
		14

* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 467, 472, 473, 480, H S 464.

Kinesiology and Health, B.S. - Pre-Health Professions - Occupational Therapy

Freshman

Fall	Credits Spring	Credits
BIOL 211	3 BIOL 212	3
BIOL 211L	1 BIOL 212L	1
ENGL 150	3 KIN 258	2
H S 110	3 MATH 140, 143, 145 or 165	3-4
KIN 252	1 SOC 134	3
KIN 253	1 Humanties Choice	3
LIB 160	1	
PSYCH 101	3	
		15-16

Sophomore

Fall	Credits Spring	Credits
BIOL 255 & 255L	4 BIOL 256 & 256L	4
CHEM 163 & 163L or CHEM 177 & 177L	5 KIN 242	0.5
ENGL 250	3 PHYS 111 or 115	4-5
PSYCH 230	3 Electives	3
Elective	1 Humanities Choice	3
		14.5-15.5

Junior

Fall	Credits Spring	Credits
KIN 366 or 365	3 H S 350	3
KIN 372	3 KIN 355	3
SP CM 212	3 KIN 360	3

STAT 101 or 104	3-4 PHIL 331	3
Electives	3 Electives	3
<hr/>		
	15-16	15
Senior		
Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses *	9
FS HN 367	1 PSYCH, SOC, or Humanities Choice	3
KIN 358	3 Elective	1
KIN 359	1 Electives (300+ Level Courses)	3
PSYCH 460	3	
Electives (300+ Level Courses)	6	
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	17	16

* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 467, 472, 473, 480, H S 464.

Kinesiology and Health, B.S. - Pre-Health Professions - Optometry

Freshman		
Fall	Credits Spring	Credits
BIOL 211	3 BIOL 212	3
BIOL 211L	1 BIOL 212L	1
CHEM 177	4 CHEM 178	3
CHEM 177L	1 CHEM 178L	1
ENGL 150	3 H S 110	3
KIN 252	1 MATH 165	4
KIN 253	1	
LIB 160	1	
<hr/>		
	15	15

Sophomore		
Fall	Credits Spring	Credits
BIOL 255 & 255L	4 BIOL 256 & 256L	4
CHEM 331	3 CHEM 332	3
CHEM 331L	1 CHEM 332L	1
ENGL 250	3 KIN 242	0.5
KIN 258	2 SOC 134	3
PSYCH 101 or 230	3 Humanities Choice	3
<hr/>		
	16	14.5

Junior		
Fall	Credits Spring	Credits
BBMB 404 or 420	3 H S 350	3

KIN 366 or 365	3 KIN 355	3
KIN 372	3 PHYS 112	5
PHYS 111	5 STAT 101 or 104	3-4
SP CM 212	3 Electives (300+ Level Courses)	3
<hr/>		
	17	17-18
Senior		
Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses *	9
KIN 358	3 MICRO 201/L or 302/L-Microbiology	3-4
KIN 359	1 Electives (300+ Level Courses)	3
KIN 360	3	
Humanities Choice	3	
Social Science Choice	3	
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	16	15-16

* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 467, 472, 473, 480, H S 464.

Kinesiology and Health, B.S. - Pre-Health Professions - Physical Therapy

Freshman		
Fall	Credits Spring	Credits
BIOL 211	3 BIOL 212	3
BIOL 211L	1 BIOL 212L	1
ENGL 150	3 KIN 258	2
H S 110	3 MATH (Trig or Calc) 143, 145 or 165	3-4
KIN 252	1 PSYCH 101 or 230	3
KIN 253	1 Humanities Choice	3
LIB 160	1	
SOC 134	3	
<hr/>		
	16	15-16

Sophomore		
Fall	Credits Spring	Credits
BIOL 255 & 255L	4 BIOL 256 & 256L	4
CHEM 177	4 CHEM 178	3
CHEM 177L	1 CHEM 178L	1
ENGL 250	3 FS HN 367	1
Humanities Choice	3 KIN 242	0.5
<hr/>		
	Electives	3

Social Science Choice			3
15			15.5
Junior			
Fall	Credits Spring		Credits
KIN 366 or 365	3 H S 350		3
KIN 372	3 KIN 355		3
PHYS 111	5 PHYS 112		5
SP CM 212	3 PSYCH 460		3
STAT 101 or 104	3-4 Elective		1
17-18			15
Senior			
Fall	Credits Spring		Credits
ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses *		9
KIN 358	3 Electives (300+ Level Courses)		6
KIN 359	1		
KIN 360	3		
Electives (300+ Level Courses)	6		
16			15

* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 467, 472, 473, 480, H S 464.

Kinesiology and Health, B.S. - Pre-Health Professions - Physician Assistant

Freshman

Fall	Credits Spring		Credits
BIOL 211	3 BIOL 212		3
BIOL 211L	1 BIOL 212L		1
CHEM 177	4 CHEM 178		3
CHEM 177L	1 CHEM 178L		1
ENGL 150	3 H S 110		3
KIN 252	1 MATH 140, 143, 145 or 165		3-4
KIN 253	1 PSYCH 101		3
LIB 160	1		
15			17-18

Sophomore

Fall	Credits Spring		Credits
BIOL 255 & 255L	4 BIOL 256 & 256L		4
CHEM 231/L or 331/L	4 KIN 242		0.5
ENGL 250	3 SOC 134		3
KIN 258	2 SP CM 212		3
PSYCH 230	3 STAT 101 or 104		3-4

Humanities Choice			3
16			16.5-17.5
Junior			
Fall	Credits Spring		Credits
BBMB 316 or 404	3 BIOL 313 & 313L		4
KIN 366 or 365	3 H S 350		3
KIN 372	3 KIN 360		3
PSYCH 460	3 PHYS 111 or 115		4-5
Humanities Choice	3		
15			14-15
Senior			
Fall	Credits Spring		Credits
ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses *		9
KIN 355	3 Electives (300+ Level Courses)		6
KIN 358	3		
KIN 359	1		
MICRO 201/L or 302/L	3-4		
Electives	3		
16-17			15

* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 467, 472, 473, 480, H S 464.

Graduate Study

The Department of Kinesiology graduate program 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>).

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 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 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 165: Running for Fitness

(0-2) Cr. 1. F.S.SS.

Running as a physical activity to improve physical fitness and health. Promotion of this activity as a lifetime endeavor. 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 168: Judo

(0-2) Cr. 1. F.S.

Fundamentals of self defense, focusing on throwing with the hands, hips and feet as well as applying pins, chokes and arm-bars. The physical skills will be taught focused on training through development of courtesy, integrity, perseverance, self control, & indomitable spirit. Emphasis on learning a way of life that promotes personal development, physical health and citizenship. 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.

KIN 173: Hap Ki Do/Martial Self-Defense

(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.

KIN 210: Concepts of Fitness and Wellness

(2-0) Cr. 2. F.S.

Coverage of behavioral skills needed to adopt and maintain lifestyles conducive to fitness and wellness. Provides students with knowledge and skills needed to adopt and maintain healthy lifestyles. Includes self-assessments and content on physical activity, nutrition, weight control, stress management and other lifestyle behaviors related to health. For non-kinesiology majors.

KIN 214: Building Comprehensive School Physical Activity Programs

Cr. 1. Repeatable, maximum of 2 credits. S.

Prereq: Freshman Classification

Service learning with practical experience in school research focused on promoting physical activity and wellness in youth. Offered on a satisfactory-fail basis only.

KIN 231: Fundamentals of Tumbling and Gymnastics

(0-3) Cr. 1. F.

Prereq: Eligibility for admission to KIN teacher education program

Fundamentals of tumbling and gymnastics apparatus. Skill enhancement, analysis, understanding practice and the development of progressions.

KIN 232: Fundamentals of Team Sports

(0-3) Cr. 1. F.

Prereq: Eligibility for admission to KIN teacher education program

Fundamentals of indoor and outdoor team sports, for example basketball, volleyball, flag football, and soccer. Skill enhancement, analysis, understanding practice and the development of progressions.

KIN 236: Fundamentals of Individual Sports and Fitness

(0-3) Cr. 1. S.

Prereq: Eligibility for admission to KIN teacher education program

Fundamentals of individual sports and fitness, for example disc golf, bowling, badminton, and weight training. Skill enhancement, analysis, understanding practice and the development of progressions.

KIN 242: Planning for Success in a Health Career

Cr. 0.5. F.S.

Prereq: KIN H major in PHP option with sophomore status or above.

Exploration of various health fields to clarify career goals and prepare a parallel career plan outside of medicine. Facilitate preparation of relevant materials for professional and graduate school admission. Offered on a satisfactory-fail basis only.

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 and Learning Community 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. Students will have out-of-class activities and work with faculty, staff and mentors to explore careers in Kinesiology and complete assignments related to identification & development of their skills and interests. Department of Kinesiology students only. Offered on a satisfactory-fail basis only.

KIN 258: Principles of Physical Fitness and Conditioning

(1-3) Cr. 2. F.S.

Introduction to five components of fitness: cardiorespiratory, muscular strength, muscular endurance, flexibility, and body composition. Students will be introduced to basic exercise prescription and evaluation principles, develop skills to assess each component of fitness, and learn different exercise modalities to enhance each component. Credit for only one of the following courses may be applied toward graduation: KIN 163, 258.

KIN 259: Leadership Techniques for Fitness Programs

(2-2) Cr. 3. 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 group fitness and weight training. 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 Secondary Physical Education

(0-3) Cr. 1. F.S.

Prereq: Admission to Educator Preparation Program

Observing, planning, and facilitating movement experiences of students in a middle and/or high school setting. Offered on a satisfactory-fail basis only.

KIN 282: Field Experience with Educational Outreach

(0-2) Cr. 1. F.S.

Prereq: Admission to Educator Preparation Program

Planning and facilitating physical education experiences for children in a community outreach setting. Experiences take place on campus. Offered on a satisfactory-fail basis only.

KIN 284: Elementary and Pre-school Movement Education

(2-3) Cr. 3. F.S.

Prereq: 3 credits in human development and family studies

Approaches to teaching movement skills, health-related fitness and school-based physical activities (in the classroom, in PE, during recess) to pre-school and elementary school age children are covered. Emphasis is placed on planning and conducting developmentally appropriate movement experiences for preschool and elementary aged children throughout the school day based upon educational psychology, exercise psychology and motor development research. Practical experience is provided. Credit in only one of the following courses may be applied toward graduation: KIN 284, 312.

KIN 285: Pre-Internship in Kinesiology and Health

(Cross-listed with H S). Cr. 1-2. F.S.

Prereq: Kinesiology and Health major and permission of internship coordinator.

Pre-internship experience with a health organization based on option. Offered on a satisfactory-fail basis only.

KIN 290: Independent Study

Cr. 1. Repeatable, maximum of 3 credits. F.S.

Prereq: 2nd semester freshmen, sophomores and permission from instructor. Study under supervision of faculty.**KIN 312: Movement Education in Elementary School Physical Education**

(2-2) Cr. 3. F.

Prereq: Admission to Educator Preparation Program, KIN 280

Planning for management and instruction of developmentally appropriate physical education for children pre-school through grade six. Laboratory experience required. Credit for only one of KIN 284 or KIN 312 may be applied toward graduation.

KIN 313: Teaching Secondary Physical Education

(2-3) Cr. 3. S.

Prereq: Admission to Educator Preparation Program, KIN 281

Current theory, practice and research on teaching focusing on management, instructional, and learning styles of students in secondary schools.

KIN 315: Coaching Theory and Administrative Issues

(3-0) Cr. 3. F.S.SS.

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.

KIN 358: 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.

KIN 359: Exercise Physiology Lab

(0-2) Cr. 1.

Prereq: Concurrent enrollment in KIN 358

Learning lab techniques in Exercise Physiology and engaging in the experimental process.

KIN 360: Sociology of Physical Activity and Health

(3-0) Cr. 3. F.S.

Prereq: SOC 134

Provide an overview of sociology to enhance students understanding of societal forces influencing behavior; Provide insights about people, environments, organization and policies that impact Kinesiology professionals.

KIN 363: Basic Electrocardiography

(2-0) Cr. 2. Alt. F., offered even-numbered years.

Understanding of human electrocardiography, including normal and abnormal 12-lead ECGs and arrhythmia identification.

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 and social factors. Psychological skills training and strategic methods for improvement of athletic performance.

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.

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.

KIN 385: Preparation and Search Strategies for Kinesiology and Health Internships

(Cross-listed with H S). Cr. 0.5. F.S.

Prereq: Junior classification; to be taken minimum of two semesters prior to required internship.

Preparation of relevant material for a successful internship/career search. Specific internship timeline, process, procedures will be reviewed.

KIN 391: Service Learning Leadership Experience

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.

Applied service learning experiences designed to provide students with opportunities to apply classroom knowledge to real world applications. Students will gain professional skills and programming experience while supporting health, education and wellness programming in school, work site or community settings. Offered on a satisfactory-fail basis only.

KIN 395: Adapted Physical Education

(Dual-listed with KIN 595). (2-2) Cr. 3. F.

Prereq: Admission to Educator Preparation Program, KIN 280/281

Etiology, characteristics, needs, and movement experiences for individuals with disabilities. Designed to provide appropriate methods of physical education instruction for students including those with disabilities as identified by the Individuals with Disabilities Education Act and students who are talented and gifted. Assessments and strategies to differentiate instruction and to adapt activities for all exceptional learners will be addressed. Laboratory experience required. KIN 595 may not be taken by students who 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 282, KIN 313, KIN 355, 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 282, KIN 312, KIN 355, 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 258, KIN 358

Principles of cardiac risk factor identification and modification; risk classification of potential exercise clients; fitness assessments; developing comprehensive exercise prescriptions for individuals.

KIN 459: Internship in Exercise Leadership

(0-3) Cr. 1. F.S.

Prereq: C- or better in KIN 259, 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 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. Environmental and nutritional aspects of exercise.

KIN 467: Exercise and Health: Behavior Change

(Dual-listed with KIN 567). (3-0) Cr. 3. F.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.

Prereq: Admission to Educator Preparation Program, KIN 280 and KIN 281

Current theory, practice and research on measurement and evaluation in physical education and youth physical activity settings. Statistics, grading, and specific assessments including fitness, motor skill, sport skill, physical activity, affective, and cognitive testing will be addressed. KIN 571 may not be taken by students who previously earned credit in KIN 471.

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.

KIN 473: Physical Dimensions of Aging

Cr. 3. F.

Prereq: KIN 355 or KIN 358 or KIN 372

Understanding the physiological, behavioral, and cognitive changes associated with aging with focus on the effects of physical activity on the aging human system. Discussions of what it means to become older, what a person can expect during the aging process, and what kind of control a person has over the aging process.

KIN 475: Physical Education Curriculum Design and Program

Organization

(Dual-listed with KIN 575). (3-0) Cr. 3. F.

Prereq: Admission to Educator Preparation Program, KIN 280 and 281

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 355; 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.

KIN 481: Biomechanics Lab

(0-2) Cr. 1.

Prereq: KIN 355

Learning lab techniques in Biomechanics 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 Kinesiology

Cr. 8-16.

Prereq: Senior classification and advance registration.

Observation and practice in exercise/fitness agencies. Offered on a satisfactory-fail basis only.

KIN 485A: Internship in Exercise Science

Cr. 8-16.

Prereq: Prereq: All required courses and C- or better in KIN 458, KIN 459 and KIN 462, Kinesiology and Health majors only. Cumulative GPA 2.0.

Observation and practice in selected exercise science agencies. Offered on a satisfactory-fail basis only.

KIN 485G: Internship in Kinesiology: General

Cr. 8-16.

Prereq: Senior classification and advance registration.

Observation and practice in exercise/fitness 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 494: Practicum in Motivational Interviewing for Health

Cr. 1-2. Repeatable, maximum of 6 credits. F.S.

Prereq: Junior/Senior status and permission of instructor

This supervised practicum course is designed for students interested in learning how to conduct 'motivational interviewing' for behavior change and health coaching applications. Students will learn strategies of motivational interviewing and have opportunities to practice applying these skills with adult clients. Offered on a satisfactory-fail basis only.

KIN 494A: Practicum in Motivational Interviewing for Health: Principles of Motivational Interviewing

Cr. 1. F.S.SS.

Prereq: Junior/Senior status and permission of instructor

Introduction to the principles of 'motivational interviewing' for behavior change and health coaching applications. Students interested in gaining practical experience in health coaching should enroll in the associated practicum course (KIN 494B). Offered on a satisfactory-fail basis only.

KIN 494B: Practicum in Motivational Interviewing for Health: Supervised Experience

Cr. 1-2. Repeatable, maximum of 5 credits. F.S.

Prereq: KIN 494A Permission of Instructor

This supervised practicum course is designed for students interested in gaining experience in applying 'motivational interviewing' strategies in behavior change and health coaching applications. Students will have opportunities to practice motivational interviewing skills with adult clients and receive on-going support and assistance needed to refine their skills. Offered on a satisfactory-fail basis only.

KIN 495: Special Topics in Kinesiology

Cr. 1-3.

Prereq: Junior or Senior classification

Offered on a satisfactory-fail basis only.

Courses primarily for graduate students, open to qualified undergraduates:**KIN 501: Research Methods in Physical Activity**

(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 511: Physical Activity Strategies for Youth

Cr. 3.

Provide adequate opportunities to develop a more in-depth understanding of (a) the challenges in youth physical activity (PA), (b) the relevant theoretical models that are popular in youth PA, (c) the strategies that can be implemented to promote PA in youth.

KIN 512: Movement Education in Elementary School Physical Education

(2-2) Cr. 3. F.

Planning for management and instruction of developmentally appropriate physical education for children pre-school through grade six. Laboratory experience required. Emphasis on evaluating published research on physical education and school-wide physical activity.

KIN 515: Injury Biomechanics

(3-0) Cr. 3. Alt. F., offered odd-numbered years.

Prereq: Kin 355 or permission of instructor.

Utilization of biomechanical principles to model injury mechanisms. Introduction to tissue mechanics of bone, articular cartilage, ligament, tendon, muscle, and nerve. Biomechanics of lower extremity, upper extremity, and head/neck/trunk injuries.

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

(3-0) Cr. 3. Alt. F., offered even-numbered years.

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, EMG, 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: recommended: an undergraduate physiology course and a biochemistry course

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.

KIN 560: Principles of Motor Control and Learning

(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.

KIN 561: Motor Development and Physical Activity

(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 will 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. F.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.

Prereq: Admission to Educator Preparation Program, KIN 280 and KIN 281

Current theory, practice and research on measurement and evaluation in physical education and youth physical activity settings. Statistics, grading, and specific assessments including fitness, motor skill, sport skill, physical activity, affective, and cognitive testing will be addressed. KIN 571 may not be taken by students who previously earned credit in KIN 471.

KIN 572: Neural Basis of Human Movement

(Dual-listed with KIN 472). (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.

KIN 575: Physical Education Curriculum Design and Program Organization

(Dual-listed with KIN 475). (3-0) Cr. 3. F.

Prereq: Admission to Educator Preparation Program, KIN 280 and 281

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 590: Special Topics

Cr. 1-3. Repeatable.

KIN 590A: Special Topics: Physical Education

Cr. 1-3. Repeatable.

KIN 590B: Special Topics: Health and Exercise Promotion

Cr. 1-3. Repeatable.

KIN 590D: Special Topics: Exercise Physiology

Cr. 1-3. Repeatable.

KIN 590E: Special Topics: Sport Sociology

Cr. 1-3. Repeatable.

KIN 590F: Special Topics: Sport/Exercise Psychology

Cr. 1-3. Repeatable.

KIN 590G: Special Topics: Motor Behavior

Cr. 1-3. Repeatable.

KIN 590H: Special Topics: Biomechanics

Cr. 1-3. Repeatable.

KIN 590I: Special Topics: Research Ethics

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). (2-2) Cr. 3. F.

Prereq: Admission to Educator Preparation Program, KIN 280/281

Etiology, characteristics, needs, and movement experiences for individuals with disabilities. Designed to provide appropriate methods of physical education instruction for students including those with disabilities as identified by the Individuals with Disabilities Education Act and students who are talented and gifted. Assessments and strategies to differentiate instruction and to adapt activities for all exceptional learners will be addressed. Laboratory experience required. KIN 595 may not be taken by students who previously earned credit in KIN 395.

KIN 599: Creative Component

Cr. 1-3. Repeatable.

Courses for graduate students:**KIN 615: Seminar**

Cr. 1-3. Repeatable.

KIN 620: Advance Research Methods in Physical Activity

(3-0) Cr. 3. S.

Prereq: KIN 501, STAT 402 and STAT 587. Doctoral students only

Culminating seminar designed to synthesize statistical and design courses with practical research issues using data from physical activity.

KIN 670: Molecular Biology of Muscle

(Cross-listed with AN S). (3-0) Cr. 3. Alt. F., offered odd-numbered years. Alt. S., offered odd-numbered years.

Prereq: BBMB 405, BBMB 420

Ultrastructure of muscle; chemistry, structure, function, and molecular biology of muscle proteins. Molecular aspects of muscle contraction, development and turnover. Cytoskeletal proteins and dynamics.

KIN 699: Research

Cr. 1-6. Repeatable.