

# 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 a 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./M.A.T.R. 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.

In addition to BOC certification, many states also have licensure requirements to practice athletic training. The Athletic Training program at Iowa State University, accredited since 2001 has transitioned to the new M.A.T.R. degree program, which includes various athletic training clinical rotations including high school, physical therapy clinics, surgical observation experiences, and emergency room observation.

### 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). Program details including 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	Introduction to the Discipline of Kinesiology	1
KIN 253	Orientation and Learning Community in Kinesiology and Health	1
KIN 258	Principles of Physical Fitness and Conditioning	2
KIN 358	Exercise Physiology (*)	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
KIN 360	Sociology of Physical Activity and Health (*)	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 485A	Internship in Health Studies: Community and Public Health	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 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 480	Functional Anatomy	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 485B	Internship in Health Studies: Physical Activity and Health Promotion	8-16
KIN 259	Leadership Techniques for Fitness Programs	3
KIN 360	Sociology of Physical Activity and Health (*)	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 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 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
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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 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 466X	Exercise for Mental Health	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 Orchesis 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	Exercise Physiology	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 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 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	Exercise Physiology	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	2	H S 105	2
KIN 252	2	KIN 258	2
KIN 253	3	PSYCH 230	3
LIB 160	1	Elective	1
PSYCH 101	3		
	<b>16</b>		<b>16</b>

### Sophomore

Fall	Credits	Spring	Credits
BIOL 255	3	BIOL 256	3
BIOL 255L	1	BIOL 256L	1
ENGL 250	3	KIN 360	3
HD FS 270	3	SP CM 212	3
SOC 134	3	Electives	3
STAT 101 or 104	3	3-4 Humanities Choice	3
	<b>16-17</b>		<b>16</b>

### Junior

Fall	Credits	Spring	Credits
H S 310	3	H S 385	0.5
H S 350	3	H S 464	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
	<b>16</b>		<b>16.5</b>

### Senior

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

Kinesiology and Health, B.S. - Exercise Science (<http://catalog.iastate.edu/previouscatalogs/2021-2022/collegeofhumansciences/kinesiology/>)

### Freshman

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

### Sophomore

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

Junior			Junior		
Fall	Credits Spring	Credits	Fall	Credits Spring	Credits
H S 350	3 KIN 355	3	FS HN 364	3 FS HN 365 or 366	3
KIN 345	3 KIN 372	3	H S 310	3 H S 380	3
KIN 358	3 KIN 385	0.5	H S 350	3 H S 385	0.5
KIN 359	1 Electives	8	KIN 358	3 H S 464	3
KIN 366	3 Humanities Choice	3	KIN 359	1 KIN 360	3
PHYS 115	4		KIN 366	3 Electives	3
	<b>17</b>	<b>17.5</b>	Elective	1	
				<b>17</b>	<b>15.5</b>
Senior			Senior		
Fall	Credits Spring	Credits	Fall	Credits Spring	Credits
ENGL 302, 314 or SP CM 312	3 KIN 485A	8-16	ENGL 302, 314 or SP CM 312	3 H S 485B	8-16
H S 380	3		H S 430	3	
KIN 458	4		KIN 458	4	
KIN 459	1		KIN 467	3	
KIN 462	3		Electives	3	
KIN 480	3				
	<b>17</b>	<b>8-16</b>		<b>16</b>	<b>8-16</b>

### 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	
	<b>16</b>	<b>16</b>

#### 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	
	<b>16</b>	<b>16-17</b>

### 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
	<b>15</b>	<b>14-15</b>

#### Sophomore

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



KIN 281	1	
	<b>15</b>	<b>16</b>

**Junior**

Fall	Credits Spring	Credits
KIN 312	3 ENGL 302, 314, or SPCM 312	3
KIN 372	3 H S 350	3
PHYS 115	4 KIN 313	3
Electives	3 KIN 358	3
Electives (300+ Level Courses)	3 KIN 359	1
	KIN 471	3
	<b>16</b>	<b>16</b>

**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	
	<b>15</b>	<b>16</b>

**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	
	<b>15</b>	<b>15-16</b>

**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
	<b>16</b>	<b>16.5-17.5</b>

**Junior**

Fall	Credits Spring	Credits
KIN 366 or 365	3 H S 350	3
KIN 372	3 KIN 355	3
PHYS 111	5 PHIL 331	3
STAT 101 or 104	3-4 Electives	3
Social Science Choice	3 Electives (300+ Level Courses)	3
	<b>17-18</b>	<b>15</b>

**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	
	<b>15</b>	<b>15</b>

\* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 466, 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	
	<b>15</b>	<b>14-15</b>

**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	<b>Sophomore</b>		
ENGL 250	3 KIN 242	0.5	<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
KIN 258	2 SOC 134	3	BIOL 255 & 255L	4 BIOL 256 & 256L	4
PSYCH 101 or 230	3 STAT 101 or 104	3-4	CHEM 331	3 CHEM 332	3
	<b>16</b>	<b>14.5-15.5</b>	CHEM 331L	1 CHEM 332L	1
<b>Junior</b>			ENGL 250	3 KIN 242	0.5
<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>	KIN 258	2 SOC 134	3
BBMB 404	3 H S 350	3	PSYCH 101 or 230	3 STAT 101 or 104	3-4
KIN 366 or 365	3 KIN 355	3		<b>16</b>	<b>14.5-15.5</b>
KIN 372	3 PHYS 112	5	<b>Junior</b>		
PHYS 111	5 Electives	3	<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
SP CM 212	3 Humanities Choice	3	BBMB 404	3 BIOL 313, 314, 328, 335, 350, or BBMB 405	3-4
	<b>17</b>	<b>17</b>	KIN 366 or 365	3 H S 350	3
<b>Senior</b>			KIN 372	3 KIN 355	3
<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>	PHYS 111	5 PHYS 112	5
ENGL 302, 314 or SP CM 312	3 BIOL 313, 314, 328, 335, 350 or BBMB 405	3-4	SP CM 212	3 Humanities Choice	3-4
KIN 358	3 Electives (300+ Level Courses)	3		<b>17</b>	<b>17-19</b>
KIN 359	1 KIN 400 Level Courses *	9	<b>Senior</b>		
Electives (300+ Level Courses)	3		<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
Humanities Choice	3		ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses *	9
Social Science Choice	3		KIN 358	3 Elective (300+ Level Course)	1
	<b>16</b>	<b>15-16</b>	KIN 359	1 Electives	3
			Elective	1 Humanities Choice	3
			Electives (300+ Level Courses)	3	
			Social Sciences Choice	3	
				<b>14</b>	<b>16</b>

\* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 466, 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	
	<b>15</b>	<b>15</b>

\* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 466, 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 Humanities Choice	3
LIB 160	1	

PSYCH 101	3	
	<b>16</b>	<b>15-16</b>

**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
	<b>16</b>	<b>14.5-15.5</b>

**Junior**

Fall	Credits Spring	Credits
KIN 366 or 365	3 H S 350	3
KIN 372	3 KIN 355	3
SP CM 212	3 PHIL 331	3
STAT 101 or 104	3-4 Electives	3
Electives	3 Electives (300+ Level Courses)	3
	<b>15-16</b>	<b>15</b>

**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	
	<b>17</b>	<b>16</b>

\* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 466, 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	
	<b>15</b>	<b>15</b>

**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
	<b>16</b>	<b>14.5</b>

**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
	<b>17</b>	<b>17-18</b>

**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
Electives (300+ Level Courses)	3	
Humanities Choice	3	
Social Science Choice	3	
	<b>16</b>	<b>15-16</b>

\* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 466, 467, 472, 473, 480, H S 464.

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

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
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	
	<b>16</b>	<b>15-16</b>

**Sophomore**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
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
	Electives	3
	Social Science Choice	3
	<b>15</b>	<b>15.5</b>

**Junior**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
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
	<b>17-18</b>	<b>15</b>

**Senior**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
ENGL 302, 314 or SP CM 312	3 KIN 400 Level Courses *	9
KIN 358	3 Electives (300+ Level Courses)	6
KIN 359	1	
Electives (300+ Level Courses)	9	
	<b>16</b>	<b>15</b>

\* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 466, 467, 472, 473, 480, H S 464.

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

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
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	
	<b>15</b>	<b>17-18</b>

**Sophomore**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
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
	<b>16</b>	<b>16.5-17.5</b>

**Junior**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
BBMB 316 or 404	3 BIOL 313 & 313L	4
KIN 366 or 365	3 FS HN 367	1
KIN 372	3 H S 350	3
PSYCH 460	3 PHYS 111 or 115	4-5
Humanities Choice	3 Electives (300+ Level Courses)	3
	<b>15</b>	<b>15-16</b>

**Senior**

<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>
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 302/L	4	

Electives	3	
	17	15

\* KIN 400 Level Course Choices (9 cr): KIN 455, 458, 462, 466, 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:

#### A TR 217: Clinical Practicum in Athletic Training I

Cr. 1. S.

*Prereq: A TR 221, A TR 222, Permission of Athletic Training Program Director*

Athletic training clinical experiences for pre-athletic training students.

Offered on a satisfactory-fail basis only.

#### A TR 218: Orientation to Athletic Training Clinical Experience

(0-2) Cr. 0.5. Repeatable, maximum of 1 credits. F.S.

Pre-athletic training clinical experience designed to orientate students to the athletic training profession prior to enrolling in athletic training course sequence. Students will observe athletic trainers in various athletic training clinical sites. Open to pre-athletic training students only. Offered on a satisfactory-fail basis only.

#### A TR 219: Anatomy Clinical Practicum

(0-2) Cr. 1. S.

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. F.

*Prereq: Credit or enrollment in A TR 222*

Athletic training clinical observation experiences to accompany A TR 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 223: Preseason Clinical Experience Practicum

(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 228: Basic Orthopedic Assessment and Evaluation Principles

Cr. 2. F.

*Prereq: BIOL 255, BIOL 255L, BIOL 256, BIOL 256L, Permission of Athletic Training Program Director*

Assessment procedures and evaluation techniques for upper and lower body orthopedic conditions and injuries. Includes an overview of mechanisms of injury, general musculoskeletal disorders, spine or neurological dysfunction.

#### A TR 229: Clinical Practicum in Athletic Training II

Cr. 1. F.

*Prereq: Concurrent enrollment in A TR 228. Permission of Athletic Training Program Director.*

Pre-Athletic training clinical experiences designed to orientate students to the assessment and evaluation principles of upper and lower body orthopedic conditions and injuries. Pre-athletic training students will observe athletic trainers in various athletic training clinical sites. Concurrent enrollment in A TR 228. Offered on a satisfactory-fail basis only.

**A TR 328: Athletic Injuries Clinical Practicum**

Cr. 1.

*Prereq: Permission of athletic training program director*

Athletic training clinical experiences for pre-athletic training students. Clinical experiences include: prevention of injury screening strategies, athletic training room and education program policies and procedures, review of athletic taping techniques, acute injury management, and anatomy review. Offered on a satisfactory-fail basis only.

**Courses primarily for graduate students, open to qualified undergraduates:**

**A TR 501: Bracing, Wrapping, and Taping Techniques**

(0-3) Cr. 1.

*Prereq: Acceptance into Athletic Training program*

Methods to select, fabricate, and/or customize prophylactic, assistive, and restrictive devices, material, and techniques into plan of care (durable medical equipment, orthotic devices, taping, bracing, splinting, protective padding, and casting). Methods of taping and wrapping for injury care, prevention of injury, and return to play. Exposure to different brands of bracing, how to fit a brace, and their use as well as casting techniques. Discussions of when to refer for prosthetics and overview of gait training.

**A TR 502: Emergency Care Procedures in Athletic Training**

(3-0) Cr. 3. SS.

*Prereq: Acceptance into Athletic Training program*

Overview of medical emergencies and other critical incidents that may occur. Evaluate and manage patients with acute conditions including triaging conditions and internal/external hemorrhage. Cardiac, respiratory, and cervical spine compromise. Conditions related to environment, fractures, dislocations, and wound care and closure. Concussion/brain injury with consideration of established protocols including: comprehensive examination, recognition, and treatment, implementation of a plan of care, referral, and return to participation.

**A TR 505: Therapeutic Modalities and Clinical Interventions**

(2-2) Cr. 3. F.

*Prereq: A TR 502, A TR 520, acceptance into Athletic Training program*

Knowledge and skills to utilize a variety of therapeutic modalities. Detailed understanding of the psychological and physiological process of pain, healing and a problem-based approach to apply theories, principles, and techniques of thermal, electrical, mechanical, light, and alternative therapies (laser, cryotherapy). Incorporation interventions (for pre-, post-, and non-surgical conditions) designed to address a patients' identified impairments, activity limitations, injuries, and participation restrictions. Home care to include self-treatment, soft tissue techniques.

**A TR 509: Athletic Training Clinical Education I**

Cr. 1. SS.

*Prereq: Acceptance into Athletic Training program*

Clinical experiences under the direct supervision of a certified athletic trainer. Techniques and clinical skills provided in both the clinical and classroom settings including: Special Olympics, emergency room rotation, environmental conditions, off season practice and conditioning sessions, biometrics/physiological monitoring systems and translation of data into effective preventative measures, clinical interventions, and performance enhancement. Offered on a satisfactory-fail basis only. Offered on a satisfactory-fail basis only.

**A TR 510: Evaluation Methods and Treatment Techniques - Lower Body**

(2-2) Cr. 3. F.

*Prereq: A TR 502, A TR 520, acceptance into Athletic Training program*

Proper methods of musculoskeletal evaluation of the lower extremity. Evaluate and manage patient (s) with acute conditions including triaging conditions that are life threatening or otherwise emergent. Obtain a medical history, proper methods of documentation, patient overview, identification of comorbidities, assessment of function, selection and use of special tests and measures assessing patient's clinical presentation, evaluation of all results to determine a plan of care, including referral when warranted. Selection and incorporations of interventions designed to address a patient's identified impairments, activity limitations, and participation restriction.

**A TR 513: Evaluation Methods and Treatment Techniques - Upper Body**

(3-0) Cr. 3. S.

*Prereq: A TR 510, A TR 521, acceptance into Athletic Training program*

Proper methods of musculoskeletal evaluation of the upper extremity including spine. Evaluate and manage patient(s) with acute conditions. Obtaining a medical history, methods of documentation, assessment of function, selection and use of special tests and measures assessing patient's clinical presentation, determine a plan of care, including referral when warranted. Selection and incorporations of interventions designed to address a patient's identified impairments, activity limitations, and participation restrictions. Review of concussion evaluation, protocols, and return to play following a head injury/concussion.



**A TR 515: Evidence-based Practice in Athletic Training**

(2-0) Cr. 2. SS.

*Prereq: A TR 522, A TR 545, acceptance into Athletic Training program*

Principles of evidence-based practice, search for evidence, grading and evaluating literature. Use of systems of quality assurance and improvement to enhance patient care, search, retrieve, and incorporating the use of contemporary principles and practices information from health informatics for clinical decisions and communication with patients/clients, family members, coaches, administrators, other healthcare providers, consumers, payors, and/or policy makers. Use of the International Classification of Functioning, Disability, and Health (ICF) as a framework for delivery and communication about patient care.

**A TR 519: Athletic Training Clinical Education II**

Cr. 3. F.

*Prereq: A TR 510, A TR 521, acceptance into Athletic Training program*

Clinical experiences under the supervision of a certified athletic trainer with client/patient populations in competitive, recreational, individual and team activities, high and low intensity activities, non-sport client/patient populations, different sexes and throughout the lifespan (pediatric, adult, elderly). Real client/patient interactions as well as assessment of clinical component procedures and policies. Clinical hours occur in a variety of settings with patients and the student will complete the clinical hours that may extend prior to and/or beyond the academic semester end date. Clinical opportunities provide a basis for evaluating the athletic training student's clinical progression through the program. Offered on a satisfactory-fail basis only. Offered on a satisfactory-fail basis only.

**A TR 520: Athletic Training Seminar A - An Introduction to Athletic Training**

(1-0) Cr. 1. SS.

*Prereq: Acceptance into Athletic Training program*

Introduction to athletic training program and an overview of policies and procedures. History of athletic training, professional domains, electronic health records, legal and administrative topics, ethics, confidentiality, and professionalism.

**A TR 521: Athletic Training Seminar B - Diagnostic Imaging and Lab Principles**

(1-0) Cr. 1. F.

*Prereq: A TR 502, A TR 520, acceptance into Athletic Training program*

Procedures on obtaining via the appropriate physician and medical staff the necessary and appropriate diagnostic tests or labs to facilitate diagnosis, referral, and treatment planning. Using evidence to inform practice and utilize systems of quality assurance and improvement to enhance patient care. Communicate and collaborate with other medical interprofessionals including radiologists, x-ray technicians, medical laboratory scientists and clinical lab technicians for best patient care and outcomes.

**A TR 522: Athletic Training Seminar C - Interprofessional Collaboration and Leadership**

(1-0) Cr. 1. S.

*Prereq: A TR 510, 521, acceptance into Athletic Training program*

Explore other allied health care professions and interprofessional collaboration for optimal patient care and referral. Total patient care and how different professions can impact the care will be explored and discussed. Participation in roundtable discussions with other interprofessional health professions and students are exposed to foundational behaviors of professional practice including but not limited to: work/family balance, ethics mentorship. Leadership, professional involvement, and promotion of the profession.

**A TR 523: Athletic Training Seminar D - Advanced Topics in Athletic Training**

(1-0) Cr. 1. SS.

*Prereq: A TR 522, A TR 545, acceptance into Athletic Training program*

Advanced clinical experiences and specialty training and exposure to cupping, ART, Graston, or ASTM technique for soft tissue mobilization and dry needling. Case study analysis utilizing previous coursework including individual self-assessment of clinical skills. Extra course fee may be needed to cover the cost of training.

**A TR 524: Athletic Training Seminar E - Professional Development in Athletic Training**

(2-0) Cr. 1. S.

*Prereq: A TR 515, A TR 550, and permission of the Athletic Training Program Director*

Assess the athletic training students' mastery of knowledge and clinical skills in athletic training, prepare students for employment, continuing education, and self-assessment. Utilizes a case study approach covering all of the domains of athletic training and demonstrates interprofessional and interdisciplinary connections. Review of all of the athletic training domains via specific exams (written, simulation and computer based) will be utilized to prepare the student to challenge the BOC examination.

**A TR 529: Athletic Training Clinical Education III**

Cr. 3. S.

*Prereq: A TR 510, A TR 521, A TR 519, acceptance into Athletic Training program*

Clinical experiences under the direct supervision of a certified athletic trainer where foundational behaviors of professional practice with emphasis being placed on evaluation of clinical skills. Reinforcement and instruction about therapeutic modalities, upper and lower extremity assessments. Clinical hours occur in a variety of settings with patients and the student will complete the clinical hours that may extend prior to and/or beyond the academic semester end date. Clinical opportunities provide a basis for evaluating the athletic training student's clinical progression through the program. Offered on a satisfactory-fail basis only.

**A TR 539: Athletic Training Clinical Education IV**

Cr. 1. SS.

*Prereq: A TR 522, A TR 545, A TR 529, acceptance into Athletic Training program*

Clinical experiences under the direct supervision of a certified athletic trainer. Advanced issues in the athletic training profession with emphasis on practical application and professional development. Utilization of evidenced based research and approaches to clinical practice with emphasis placed on lab reports, imaging results, life-span issues, and diverse patient populations. Foundational behaviors of professional practice and emphasis will focus on evaluation, treatment, rehabilitation, and clinical skills. Offered on a satisfactory-fail basis only.

**A TR 545: Therapeutic Exercise and Rehabilitation Interventions**

(2-2) Cr. 3. S.

*Prereq: A TR 510, A TR 521, acceptance into Athletic Training program*

Therapeutic and corrective exercise, joint mobilization, soft tissue techniques, movement training (including gait training), motor control/proprioceptive activities, task-specific functional training, home care including self-treatment and exercise, cardiovascular training. Pre, post, and non-surgical conditions and addressing activity limitations, participation restrictions and return to play guidelines.

**A TR 549A: Athletic Training Clinical Education Study Abroad: Preparing for the Experience**

Cr. 1. S.

*Prereq: In addition to the study abroad application requirements, students must be accepted into their intended program, junior classification or graduate student majoring in Athletic Training, minimum GPA of 3.0, and completion of A TR 220, or A TR 228 and A TR 229.*

Preparation for a study abroad experience that is focused on the discipline of athletic training in another country. Pre-travel for A TR 549B study abroad experience.

Meets International Perspectives Requirement.

**A TR 549B: Athletic Training Clinical Education Study Abroad**

Cr. 2. SS.

*Prereq: Accepted to study abroad by the A TR Program Director and passing A TR 549A.*

First-person perspective into the athletic training profession in another country as well as provide enrichment experiences related to the history and culture of that country. Follow-up course and experience of one credit A TR 549A which was intended to prepare the student for the study abroad experience.

Meets International Perspectives Requirement.

**A TR 550: Pharmacological Issues in Athletic Training**

(2-0) Cr. 2. SS.

*Prereq: A TR 522, A TR 545, acceptance into Athletic Training program*

General medical and pharmacological issues generally found in the field of athletic training. Medications used to treat medical conditions and the ability to educate patients regarding appropriate pharmacological agents for the management of their condition, including indications, contraindications, dosing, interactions, and adverse reactions.

Administration of medications by the appropriate route upon the order of a physician or other provider with legal prescribing authority.

**A TR 559: Athletic Training Clinical Education V**

Cr. 5. F.

Course monitors student progression of athletic training proficiencies, acquiring clinical skills under the direct supervision of a certified A TR. Reinforce and instruct new info about general medical conditions and administrative topics and begin the immersive clinical experience required prior to graduation. Field experience provides immersive and additional athletic training experiences and clinical responsibilities for a minimum two 5 week rotations under the direct supervision of a certified A TR or allied health care professional. Required to complete a minimum of 25 hrs per week of field clinical experience. Site approved by the preceptor and A TR program director prior to beginning the immersion clinical experience. Clinical experience may extend beyond the academic semester end date and the clinical hours are a component of this course. Offered on a satisfactory-fail basis only.

**A TR 560: General Medical and Behavioral Health Issues**

(3-0) Cr. 3. SS.

*Prereq: A TR 522, A TR 545, acceptance into Athletic Training program*

Medical issues generally observed in the athletic training profession. Development and implementation of wellness strategies to mitigate the risk for long-term health conditions across the lifespan and in an active population. Topics including dermatology, mental illness, neurological disorders, pulmonary disease, respiratory infections, viral infections, autoimmune disorders, oncology, gastrointestinal conditions and sexually transmitted infections. Identify, refer, give support to patients with behavioral health conditions; educate clients/patients about effects, participation consequences, risks of misuse and abuse of alcohol, performance-enhancing drugs/substances; and over the counter, prescription and recreational drugs including drug testing policies and procedures.

**A TR 569: Athletic Training Immersion Clinical Education VI**

Cr. 5. S.

*Prereq: Permission of Athletic Training Program Director*

Cumulative clinical experience to gain a more in-depth experience in the field of athletic training. Student selects a field or site experience that meets their professional goals. Field experience is designed to provide immersive and additional athletic training experiences for a minimum of 10 weeks under the direct supervision of a certified athletic trainer. Site approved by the preceptor and A TR program director prior to beginning the immersion clinical experience. Required to complete a minimum of 25 hours per week of field experience. Clinical experience may extend beyond the academic semester end date and the clinical hours are a component of this course. Offered on a satisfactory-fail basis only.

**A TR 570: Injury Intervention, Rehabilitation and Patient Care**

(2-2) Cr. 3. F.

*Prereq: A TR 515, A TR 550, A TR 560 and acceptance into Athletic Training program*

Basic understanding of injury and sport psychology and its application to the overall health and well-being of athletic and general population clients. Psychological, social, socio-economical, and environmental factors that influence a client/patient and in their injury susceptibility, reaction, immediate care, and adherence to rehabilitation will be explored. Assessment and intervention techniques to promote and facilitate rehabilitation in a variety of professional settings and with patients from different backgrounds and social issues that may impact a patient. Overview of special populations (adolescent, female, special populations of athletes/physically active patients). Foundational behaviors of professional practice and working with other allied health care professionals in the overall health and well-being of a patient will be explored.

**A TR 575: Athletic Training Organization and Administration**

(3-0) Cr. 3. S.

*Prereq: Concurrently enrolled in A TR 569.*

Knowledge and skills necessary for the administration aspect of an athletic training program. Course content includes but is not limited to: PPEs, how to manage physical, human, and financial resources in the delivery of healthcare services. Discussion of patient and insurance management, working relationships with interprofessional members of the health care team, policies and procedures for guidance in the daily operation of athletic training services including EAP or other critical incidents (concussion or other brain injuries), patients in behavioral health crisis, record keeping, athletic training facility design, resume development, and administrative/leadership skills and mentoring.

**Courses primarily for undergraduates:****DANCE 120: Modern Dance I**

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

Introduction and practice of basic dance concepts, including preparatory techniques and guided creativity problems. No previous modern dance experience required. 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.S.

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, rumba, 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. 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. 1. 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 232*

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 250: Yoga Movement**

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

Mixed-level Hatha Yoga class that emphasizes Iyengar style yoga. Yoga Movement is designed for developing awareness and personal practice with yoga poses and relaxation techniques. Attention will be paid to postural alignment to safely develop strength, endurance, flexibility, balance, and reduce stress. The practice develops awareness and consciousness in the physical body to help unite body and mind. Class will include introduction to other somatic practices, asanas (poses), breathing practices, meditation, yoga philosophy and deep relaxation.

**DANCE 270: Dance Appreciation**

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

Meets International Perspectives Requirement.

**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 even-numbered years.

*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 yoga, body therapies, mindfulness and dance composition to enhance the physical and mental performance of the individual.

**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.SS.

Discussion and application of the basic techniques of utilizing bloodborne pathogen safety measures, administering first aid and cardiopulmonary resuscitation. ARC layperson certification available.

**H S 110: Personal and Consumer Health**

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

Physical, mental, emotional and social aspects of health as a basis for understanding and promoting health, and preventing poor health conditions. Study of personal responsibility on the long-term benefits of maintaining a high level of wellness and health. Identification and mitigation of negative lifestyle habits.

**H S 215: Drug Education**

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

*Prereq: PSYCH 101 or PSYCH 230*

Discussion of use, abuse and addiction of mood modifying substances in contemporary society. Includes study of tobacco, alcohol, and other drugs.

**H S 275: Health Education in the Elementary School**

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

*Prereq: HD FS 102 or HD FS 226*

The application of instructional strategies related to health education and physical education for teachers at the elementary level. Credit for both H S 275 and 375 may not be applied toward graduation.

**H S 285: Pre-Internship in Kinesiology and Health**

(Cross-listed with KIN). 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.

**H S 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.

**H S 305: Instructor's First Aid and Cardio-pulmonary Resuscitation**

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

*Prereq: H S 105*

Discussion and practice of skills needed to teach first aid and cardiopulmonary resuscitation. ARC certification available.

**H S 310: Community and Public Health**

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

*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.

*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: Preparation and Search Strategies for Kinesiology and Health Internships**

(Cross-listed with KIN). 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.

**H S 417: Supervised Teaching in Health Education in the Secondary School**

Cr. 16. F.S.

*Prereq: H S 375*

Advance registration required.

**H S 417A: Supervised Teaching in Health Education in the Secondary School: Initial Endorsement**

Cr. 16. 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.

Techniques of needs assessment, program design, administration, and evaluation of community health education programs in various settings.

**H S 464: Physical Activity Epidemiology**

(Dual-listed with H S 564). (3-0) Cr. 3. F.S.

*Prereq: KIN 358 or H S 350; STAT 101 or STAT 587.*

Understanding health benefits of physical activity on chronic disease prevention and health promotion throughout the life span, from clinical and public health perspectives. Discussion and application of real-life physical activity assessment, research, guidelines, and promotion in population levels.

**H S 485: Internship in Health Studies**

Cr. 8-16.

*Prereq: Senior classification and advanced registration.*

Advance registration required. Supervised experience in health related agencies. Offered on a satisfactory-fail basis only.

**H S 485A: Internship in Health Studies: Community and Public Health**

Cr. 8-16. F.S.SS.

*Prereq: All required courses and C- or better in H S 310, H S 350, and H S 430. Kinesiology and Health majors only. Cumulative GPA 2.0.*

Observation and practice in selected community and public health agencies. Offered on a satisfactory-fail basis only.

**H S 485B: Internship in Health Studies: Physical Activity and Health Promotion**

Cr. 8-16. F.S.SS.

*Prereq: All required courses and C- or better in KIN 358, KIN 359, KIN 366, KIN 458, KIN 467, and H S 350. Kinesiology and Health majors only. Cumulative GPA 2.0.*

Observation and practice in selected physical activity and health promotion agencies. 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 graduate students, open to qualified undergraduates:**

**H S 564: Physical Activity Epidemiology**

(Dual-listed with H S 464). (3-0) Cr. 3. F.S.

*Prereq: KIN 358 or H S 350; STAT 101 or STAT 587.*

Understanding health benefits of physical activity on chronic disease prevention and health promotion throughout the life span, from clinical and public health perspectives. Discussion and application of real-life physical activity assessment, research, guidelines, and promotion in population levels.

**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 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: Introduction to the Discipline of Kinesiology**

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

Relevant societal issues and research within the discipline of Kinesiology (the study of movement) are addressed.

**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: Exercise Physiology**

(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. F.S.SS.

*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 381A: Study Abroad Experience in Kinesiology: Preparing for the Experience**

Cr. 1. Alt. S., offered even-numbered years.

*Prereq: Undergraduate student majoring in either Kinesiology and Health or Athletic Training, sophomore status or higher, minimum GPA of 2.5 and having completed KIN 252 and 258 by the end of the current spring semester.*

Prepares student for a study abroad experience focused on the discipline of Kinesiology in another country. Precedes a multi-credit KIN 381B course that is the actual study abroad experience. The prerequisite for this course is having been accepted to study abroad by the Program Director of your intended program. Offered on a satisfactory-fail basis only.

Meets International Perspectives Requirement.

**KIN 381B: Study Abroad Experience In Kinesiology**

Cr. 2. Alt. SS., offered even-numbered years.

*Prereq: Having been accepted to study abroad by the Program Director and passing the relevant KIN 381A.*

First-person perspective into the discipline of Kinesiology in another country as well as provide enrichment experiences related to the history and culture of that country. Follows a 1 credit KIN 381A course that was intended to prepare you for this study abroad experience. Offered on a satisfactory-fail basis only.

Meets International Perspectives Requirement.

**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 (minimum C-)*

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 (minimum C-)*

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. F.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. S.

*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. F.S.SS.

*Prereq: All required courses and C- or better in KIN 355, KIN 358, KIN 359, KIN 366, KIN 372, KIN 458, KIN 459, KIN 462 and H S 350, 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 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*

Analysis of factors affecting work capacity and performance. Concepts and measurement of human energy metabolism and bioenergetic adaptations to training.

**KIN 551: Advanced Physiology of Exercise II**

(2-3) Cr. 3.

*Prereq: KIN 505*

Analysis of factors affecting cardiovascular and respiratory function in response to multiple stressors including exercise. Influence of environment will also be discussed.

**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 Neuromotor Control and Learning**

(2-3) Cr. 3.

*Prereq: KIN 372*

Theoretical perspectives of neuromotor control and learning will be examined as well as factors that facilitate motor learning. Neuromotor control and learning will also be addressed by studying functional tasks such as reach-to-grasp and locomotion.

**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. F.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. 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.