

Department of

Exercise & Sports Science



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<http://lvwww.byui.edu/exerciseandsportsci/>

Department of Exercise and Sports Science

The Department of Exercise and Sports Science is committed to teaching a wide range of special interests for the general student body as well as faculty and staff. Course work has been designed to assist students who desire to major in Exercise Physiology, and minor in Exercise & Sports Science or Physical Education Teaching.

The Exercise Physiology Major is a program that focuses on the scientific study of the physiological processes involved in physical and motor activity. It includes instruction in muscular and skeletal anatomy; cellular mechanics of muscle contraction; nutrient biochemistry; and fuel utilization; as well as other physiological responses to exercise, muscular fatigue and exhaustion. Courses also cover muscle and body training, physiology of specific exercises and activities, and motor mechanics.

The Physical Education Teaching Minor prepares students to teach in the secondary school systems. Courses prepare students in basic sport and fitness skills, physical education classroom management, and physical education administration. Students learn to effectively promote lifelong fitness through physical activity.

The Exercise and Sports Science minor focuses on the application of scientific techniques in exercise and sports with specific application to areas such as aerobic conditioning, personal fitness, strength training, and application of conditioning in community and private sports fitness programs.

The Sports Management minor helps prepare students who are looking for a career in athletic administration, sports business, and athletics.



Minor in Physical Education Teaching (163)

Minor Requirements

| <i>Take these courses</i> | | <i>Take 1 course:</i> | | <i>Take 1 course</i> | | <i>Cont. from previous column</i> | | <i>Program Notes:</i> |
|---------------------------|----------|-----------------------|----------|--------------------------|---|-----------------------------------|----------|-----------------------|
| ESS 320 | 2 | ESS 341 | 2 | ESS 100 | 1 | ESS 134 | 1 | |
| ESS 330 | 2 | ESS 342 | 2 | ESS 101 | 1 | ESS 140 | 1 | |
| ESS 350 | 2 | ESS 343 | 2 | ESS 110 | 1 | ESS 141 | 1 | |
| ESS 361 | 1 | ESS 344 | 2 | ESS 117 | 1 | ESS 144 | 1 | |
| ESS 366 | 2 | ESS 345 | 2 | ESS 118 | 1 | ESS 145 | 1 | |
| ESS 375 | 3 | ESS 346 | 2 | ESS 119 | 1 | ESS 147 | 1 | |
| HS 131 | 2 | ESS 347 | <u>2</u> | ESS 121 | 1 | ESS 148 | 1 | |
| HS 349L | <u>1</u> | | 2 | ESS 123 | 1 | ESS 160 | 1 | |
| | 15 | | | ESS 124 | 1 | ESS 161 | 1 | |
| <i>Take 2 courses</i> | | | | ESS 126 | 1 | ESS 162 | 1 | |
| ESS 362 | 1 | | | ESS 127 | 1 | ESS 178 | 1 | |
| ESS 363 | 1 | | | ESS 128 | 1 | ESS 195 | 1 | |
| ESS 364 | <u>1</u> | | | ESS 131 | 1 | ESS 196 | <u>1</u> | |
| | 2 | | | ESS 133 | 1 | | 1 | |
| | | | | <i>Cont. next column</i> | | | | |

Total Minor Credits=20

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Minor in Sports Management (196)

Minor Requirements

| <i>Take these courses</i> | <i>Program Notes:</i> |
|---------------------------|-----------------------|
| B 101 | |
| CIT 140 | |
| COMM 130 | |
| COMM 230 | |
| ENG 316 | |
| ESS 350 | |
| ESS 483 | |
| FDMAT 221 | |
| <u>3</u> | |
| 23 | |

Total Minor Credits=23

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

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Exercise and Sports Science Pre-approved Clusters

| Exercise and Sports Science | | |
|-----------------------------|-------------------------|-----------|
| <i>Take these courses:</i> | | |
| ESS 320 | Motor Development | 2 |
| ESS 347 | Sports Conditioning | 2 |
| ESS 375 | Exercise Physiology | 3 |
| ESS 375L | Exercise Physiology Lab | 1 |
| HFED 100 | Nutrition | 3 |
| Choose any ESS 100 course | | <u>1</u> |
| Total Credits | | 12 |

| Coaching (Non-education) | | |
|-------------------------------------|--|-----------|
| <i>Take these courses:</i> | | |
| ESS 335 | Advanced Sports Psychology | 3 |
| ESS 350 | Evaluation and Administration | 2 |
| ESS 375 | Exercise Physiology | 3 |
| ESS 375L | Exercise Physiology Lab | 1 |
| ESS 381 | Strength Training Theory and Application | 3 |
| Choose any 1 coaching theory course | | <u>2</u> |
| Total Credits | | 14 |

| Professional Health | | |
|----------------------------|--------------------------|-----------|
| <i>Take these courses:</i> | | |
| BIO 264 | Anatomy & Physiology | 4 |
| ESS 320 | Motor Development | 2 |
| ESS 375 | Exercise Physiology | 3 |
| ESS 375L | Exercise Physiology Lab | 1 |
| HS 365 | Kinesiology | 3 |
| <i>Take 1 courses:</i> | | |
| ESS 117 | Beginning Racquetball | 1 |
| ESS 119 | Intermediate Racquetball | 1 |
| ESS 130 | Golf | <u>1</u> |
| Total Credits | | 14 |

| Professional Training | | |
|----------------------------|--|-----------|
| <i>Take these courses:</i> | | |
| ESS 204 | Aerobic Fitness Techniques | 2 |
| ESS 347 | Sports Conditioning | 2 |
| ESS 375 | Exercise Physiology | 3 |
| ESS 375L | Exercise Physiology Lab | 1 |
| ESS 381 | Strength Training Theory and Application | 3 |
| HS 410 | Fitness Appraisal and Practice | <u>3</u> |
| Total Credits | | 14 |

| Course Descriptions | Credits* | |
|--|----------|--|
| ESS 100 Aerobic Fitness Fullfills GE Basic Skills requirement. Fee: \$4 A class using cardiovascular exercise and intensity. (Fall, Winter, Spring) | (1:0:2) | ESS 123 Badminton Beginning (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 To teach the basic fundamentals of badminton. (Fall, Winter, Spring) |
| ESS 101 Water Aerobics Fullfills GE Basic Skills requirement. Fee: \$4.00 A type of exercise using muscle resistance in water. A good aerobic activity for pregnant students. (Fall, Winter, Spring) | (1:0:2) | ESS 124 Badminton Intermediate (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Have played the game enough to know and exhibit knowledge of rules and the ability to play intermediate badminton. Designed to teach strategies beyond the beginning fundamentals of badminton to a more advanced student. (Fall, Winter, Spring) |
| ESS 102 Footwork, Agilities & Plyometrics Fullfills GE Basic Skills requirement. Fee: \$4.00 Class consists of footwork agility, running, conditioning, flexibility, change of direction, coordination, and reaction time. (Fall, Winter) | (1:0:2) | ESS 126 Archery Beginning (1:0:2) Fullfills GE Basic Skills requirement. To teach basic strategies and fundamentals of beginning archery. (Fall, Winter, Spring) |
| ESS 110 Fencing Fullfills GE Basic Skills requirement. Fee: \$4.00 To introduce the student to the sport of fencing through experience with the French foil. Skills, drills, knowledge of judging and directing are included. (Fall, Winter, Spring) | (1:0:2) | ESS 127 Archery Intermediate (1:0:2) Fullfills GE Basic Skills requirement. Prerequisite: Previous archery experience and skills to an intermediate level. Class designed to help student learn more advanced techniques in the sport of archery through hands-on application of using the bow and arrow through lecture, demonstration, and practice of archery skills. (Fall, Winter, Spring) |
| ESS 115 Military Physical Fitness Fullfills GE Basic Skills requirement. Fee: \$4.00 A military-style fitness program open to all students. (Fall, Winter, Spring) | (1:0:2) | ESS 128 Beginning Bowling (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$32.00 To teach basic skills, fundamentals and techniques of bowling. (Fall, Winter, Spring) |
| ESS 117 Racquetball Beginning Fullfills GE Basic Skills requirement. Fee: \$4 To teach basic skills, fundamentals, and techniques of beginning racquetball. Students must provide their own goggles. (Fall, Winter, Spring) | (1:0:2) | ESS 130 Body Weight Management (1:1:1) To teach principles of nutrition and exercise specifically for weight management and to create a peer group of individuals to support each other in these goals. (Fall, Winter, Spring) |
| ESS 118 Wallyball Fullfills GE Basic Skills requirement. Fee: \$4.00 To introduce and instruct students in wallyball skills. (Fall, Winter, Spring) | (1:0:2) | ESS 131 Golf (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$20.00 To teach basic skills, fundamentals, and techniques of golf effectively to develop a sufficient level of physical fitness and skill level. Students will be required to pay green fees. (Fall, Winter, Spring) |
| ESS 119 Racquetball Intermediate Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: 1. Must have knowledge of strategies, and fundamentals of racquetball and have ability to play at a more advanced level than beginner. 2. Student will furnish and wear racquetball goggles while playing racquetball. A more advanced course in the game of racquetball providing instruction in more advanced skills and strategies (Fall, Winter, Spring) | (1:0:2) | ESS 133 Tennis Beginning (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 To teach basic skills and fundamentals of tennis. Locker fees are required for winter semester. (Fall, Winter, Spring) |
| ESS 121 Softball Fullfills GE Basic Skills requirement. To teach women the fundamentals and strategies of softball. (Fall, Spring) | (1:0:2) | ESS 134 Tennis Intermediate (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Must be able to play tennis at intermediate level To enhance tennis technique and skill with competitive work-outs. The class will be tennis instruction beyond beginning tennis and drill with game and tournament/competition play. Locker fee required for winter semester. (Fall, Winter, Spring) |
| | | ESS 139 Cardio Fitness (1:0:2) Prerequisite: ESS 177 recommended. Access to Fitness for Life Manual. Prepare workout schedule, do workouts outside of class, and report these workouts to instructor. (Fall, Winter) |
| | | ESS 140 Beginning Basketball (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 To provide skills and strategies for beginning basketball. (Fall, Winter, Spring) |

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| <p>ESS 141 Intermediate Basketball (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Competitive basketball or ability to play beyond beginning level. To provide skills and strategies of intermediate basketball (Fall, Winter, Spring)</p> | <p>ESS 162 Swimming Advanced (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Student must have passed intermediate swimming To provide advanced swimmers to learn and swim at a more advanced level. (Fall, Winter)</p> |
| <p>ESS 141W Basketball Intermediate (1:1:1) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Beginning basketball or high school basketball. Women only. A class designed specifically to teach women the fundamentals of intermediate basketball. (Fall, Winter, Spring)</p> | <p>ESS 175 Adaptive Physical Education (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 This class fulfills the G.E. Basic Skills requirement for those who are unable to participate in regular physical education skills classes. This class does not replace ESS 177. HS 131, or HS 131W. (Fall, Winter, Spring)</p> |
| <p>ESS 144 Beginning Volleyball (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Be a beginning volleyball student. This class introduces and instructs students in basic volleyball skills and in the basic game of volleyball. (Fall, Winter, Spring)</p> | <p>ESS 177 Fit For Life (1:1:1) Fullfills GE Basic Skills requirement. To teach students to prepare a personal fitness program including cardio vascular endurance, nutrition, strength, flexibility, and stress management. (Fall, Winter, Spring)</p> |
| <p>ESS 145 Intermediate Volleyball (1:1:1) Fullfills GE Basic Skills requirement. Prerequisite: Beginning Volleyball skills. Basics of offense and defense. This class is for students proficient in beginning volleyball. (Fall, Winter, Spring)</p> | <p>ESS 178 Weight Training (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 To provide students with a resistance strength training program. (Fall, Winter, Spring)</p> |
| <p>ESS 146 Advanced Volleyball (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Intermediate volleyball skills and knowledge of offense and defense This class enables the more experienced volleyball student to refine skills and participate with other excellently skilled students. (Fall, Winter, Spring)</p> | <p>ESS 178W Weight Training (1:1:1) Fee: \$4.00 Prerequisite: For women only. A class designed specifically to teach women proper weight training techniques. (Fall, Winter, Spring)</p> |
| <p>ESS 147 Soccer Beginning (1:0:2) Fullfills GE Basic Skills requirement. To provide a wide variety of skills and techniques of beginning soccer. (Fall, Winter, Spring)</p> | <p>ESS 179 Olympic Weight Training (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Student must be able to power clean and rack jerk 135 lbs, be able to bench press 165 lbs, and dead lift 225 lbs. To provide student with a competitive, structured weight training program. (Fall, Winter)</p> |
| <p>ESS 148 Soccer Intermediate (1:1:1) Fullfills GE Basic Skills requirement. Prerequisite: Must have Beginning Soccer or have played on an organized soccer team. This course is for experienced players that have played competitive soccer and will be taught to understand the game at a higher tactical level. (Fall, Winter, Spring)</p> | <p>ESS 195 Skiing (1:0:5) Fullfills GE Basic Skills requirement. Fee: \$300.00 Prerequisite: Skiers will provide their own insurance. Participants of varying ski abilities are provided with skill level fundamentals. The first day of class will be a mandatory meeting in the Hart Main Gym and will not be a ski day. (Winter)</p> |
| <p>ESS 160 Swimming Beginning (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 To instruct students in basic swimming skills and strokes. (Fall, Winter, Spring)</p> | <p>ESS 196 Snowboarding (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$300.00 Prerequisite: Students must provide their own insurance. Participants of varying abilities of snowboarding are provided with skill level fundamentals. The first day of class will be a mandatory meeting in the Hart main gym and will not be a snowboard day. (Winter)</p> |
| <p>ESS 161 Swimming Intermediate (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Student must have passed beginning swim class. An intermediate swimming class designed to instruct students beyond the basic swimming skills and strokes. (Fall, Winter, Spring)</p> | <p>ESS 204 Aerobic Fitness Techniques (2:2:1) Fee: \$4.00 This course teaches basic information and guidelines for becoming a group fitness instructor and will help prepare students for a group fitness certification. (Fall, Winter)</p> |
| <p>ESS 162 Swimming Advanced (1:0:2) Fullfills GE Basic Skills requirement. Fee: \$4.00 Prerequisite: Student must have passed intermediate swimming To provide advanced swimmers to learn and swim at a more advanced level. (Fall, Winter)</p> | <p>ESS 205 Intramurals (2:2:0) To teach organization of a well-run tournament within the overall Intramural and campus recreation program. (Fall, Winter, Spring)</p> |
| | <p>ESS 206 Sports Officiating Football (1:1:0) Rules, techniques, problems, and procedures in officiating football to prevent injuries, procedures in refereeing football. (Fall, Spring)</p> |

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| <p>ESS 207 Sports Officiating Softball (1:1:0) Rules, techniques, problems, and procedures in officiating softball to prevent injuries, procedures in refereeing softball. (Fall, Spring)</p> <p>ESS 208 Sports Officiating Soccer (1:1:0) Rules, techniques, problems, and procedures in officiating soccer to prevent injuries, procedures in refereeing soccer. (Fall, Spring)</p> <p>ESS 209 Sports Officiating Volleyball (1:1:0) Rules, techniques, problems, and procedures in officiating volleyball to prevent injuries, procedures in refereeing volleyball. (Fall, Winter)</p> <p>ESS 210 Sports Officiating Basketball (1:1:0) Rules, techniques, problems, and procedures in officiating basketball to prevent injuries, procedures in refereeing basketball. (Fall, Winter)</p> <p>ESS 264 Lifeguarding (3:4:0) Fee: \$4.00 Prerequisite: At least 15 years of age. Able to swim at least 500 yards. Good strong breast stroke kick or scissor kick. Strong swimming skills. To instruct students to receive American Red Cross Certification in lifeguard training and CPR. The course gives full certification needed to lifeguard at pools, lakes, and reservoirs. (Fall, Winter, Spring)</p> <p>ESS 268 WSI (3:5:0) Fee: \$4.00 Prerequisite: Intermediate or advanced swimming skills. To teach potential swimming instructors fundamentals of instructor training. (Winter)</p> <p>ESS 299 Professional Seminar (1-3:0:0) Prerequisite: ESS 350 suggested To provide teaching, coaching, managing, training, and administrative or organization experiences. (Fall, Winter, Spring)</p> <p>ESS 320 Motor Development (2:2:0) To help students understand motor skill performance from birth to adult. (Fall, Winter, Spring)</p> <p>ESS 330 Fundamentals in Coaching and Sports Psychology (2:2:0) To analyze and study the mind and movement as it applies to the psychological principles of activity in sports and activity. To expose students to principles and practices of effective coaching. (Fall, Winter, Spring)</p> <p>ESS 335 Advanced Sports Psychology (3:3:0) The object of this class is to present, discuss, learn and apply the various mind-sets, mental approaches, and techniques of successful athletes and coaches at all levels. (Fall, Winter)</p> <p>ESS 341 Baseball Theory (2:2:0) Prerequisite: Must have a knowledge and skills of baseball. To explore the concepts, competencies, ideas, ideals, and principles of teaching or coaching baseball fundamentals. (Fall, Winter, Spring)</p> <p>ESS 342 Basketball Theory (2:2:0) Prerequisite: Must have knowledge and skills of basketball. To explore the concepts, competencies, ideas, ideals and principles of teaching or coaching basketball fundamentals. (Fall, Winter, Spring)</p> <p>ESS 343 Football Theory (2:2:0) Prerequisite: Must have knowledge and skills of football. To explore the concepts, competencies, ideas, ideals, and principles of teaching or coaching football fundamentals. (Fall, Winter, Spring)</p> | <p>ESS 344 Track & Field Theory (2:2:0) Prerequisite: Must have knowledge and skills of track and field. To explore the concepts, competencies, ideas, ideals, and principles of teaching or coaching track and field fundamentals. (Fall, Spring)</p> <p>ESS 345 Volleyball Theory (2:2:0) Fee: \$4.00 Prerequisite: Must have a knowledge and skills of volleyball. To explore the concepts, competencies, ideas, team organization, and principles of volleyball. (Fall, Winter)</p> <p>ESS 346 Wrestling Theory (2:2:0) Prerequisite: Must have a knowledge and skills of wrestling. To help wrestling coach/teacher develop a philosophy of wrestling. (Fall, Winter, Spring)</p> <p>ESS 347 Sports Conditioning (2:2:0) Students learn to apply aerobic and anaerobic exercise in personal and team sports settings. (Fall, Winter, Spring)</p> <p>ESS 350 Evaluation & Administration (2:2:0) Prerequisite: BIO 264 & BIO 265 recommended. To familiarize student with a wide variety of administrative responsibilities with regard to physical education. (Fall, Winter)</p> <p>ESS 361 Sports Skills and Secondary Methods I (1:1:1) This class will instruct students to teach the methods of basketball and golf. (Fall, Spring)</p> <p>ESS 362 Sports Skills and Secondary Methods 2 (1:1:1) This class will instruct students to teach the methods of volleyball and tennis. (Fall, Winter, Spring)</p> <p>ESS 363 Sports Skills and Secondary Methods III (1:1:1) This class will instruct students to teach the methods of soccer and badminton. (Fall, Winter, Spring)</p> <p>ESS 364 Sports Skills and Secondary Methods IV (1:1:1) This class will instruct students to teach the methods of weights and softball. (Fall, Spring)</p> <p>ESS 366 Adaptive Education Special Population (2:2:1) Prerequisite: Bio 264 & Bio 265 recommended. Must be a junior or senior level student. To help students understand how individuals learn and develop, and how they can provide opportunities that support their physical, cognitive, social, and emotional development. (Fall, Winter, Spring)</p> <p>ESS 375 Exercise Physiology (3:3:0) Prerequisite: It is suggested that you take these classes: BS 264, BS 265, and HS 131. Teaches a branch of physiology that deals with the functioning of the body during exercise. (Fall, Winter, Spring)</p> <p>ESS 375L Exercise Physiology Lab (1:0:2) Fee: \$20.00 Prerequisite: Concurrent enrollment in PE 375 A class to introduce some of the fundamental laboratory techniques used for the field of Exercise Science. (Fall, Winter, Spring)</p> <p>ESS 381 Strength Training Theory and Application (3:3:0) Prerequisite: ESS 375 This course explores effective methods of applying strength resistance workouts to individual and team sports. (Fall, Winter, Spring)</p> <p>ESS 455 Exercise Science Selected Topics (1:1:0) Prerequisite: ESS 375 This course will help students understand various topics regarding Exercise Science and how these topics are related to the physical body. (Fall, Winter)</p> |
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ESS 483 Sports Law

(3:3:0)

Provides a managerial approach to issues and problems that confront sports managers, focusing on concepts of tort law, contract law, constitutional law, antitrust law, labor law and intellectual property law.

(Fall, Winter)

ESS 497 Exercise Science Seminar

(3:3:0)

Prerequisite: Bio 264, Bio 265, Chem 106, ESS 320, ESS 350, ESS 375, ESS 375L, HFED 100, Math 221.

A capstone course in which students learn how to develop a research project and oral presentation.

(Fall, Winter, Spring)

ESS 498 Internship

(1-2:0:0)

Prerequisite: ESS 375, ESS 375L, ESS 350, ESS 320, HFED 100, CHEM 105, BIO 264, BIO 265; consent of instructor required.

Students will complete a job-related experience pertinent to Exercise Science such as cardiac rehabilitation, health club administration, human performance, etc.

(Fall, Winter, Spring)