



## College of Health Science & Human Service

Bachelor of Science  
4-year program

**sound like you?**  
**Work in fitness/well-**  
**ness • Rehabilitate**  
**athletes • Prepare**  
**for physical therapy**  
**school**

### did you know?

Studies have shown that active lifestyles will reduce the risk of coronary heart disease, diabetes, cancer and stroke.

## Exercise Science at UT

Exercise science studies human physical performance. Exercise scientists assist people of all ages in developing and maintaining healthy, productive and satisfying lifestyles. There are many different specialties that can be explored.

UT's exercise science program has a variety of specialties to choose from — pre-physical therapy, athletic training, biomechanics, clinical and applied physiology, exercise physiology, and kinesiotherapy. Students find UT's exercise physiology, applied biomechanics and sports injury research laboratories to be useful resources in studying their special interests.

Students gain real-world experience and earn academic credit through field placements and internships in schools and in local fitness, rehabilitation and hospital settings. They interact with clients while working with outstanding teachers and health professionals. In addition, many exercise science students are involved in a variety of clinical settings to practice and refine their clinical skills, among them UT's intercollegiate sports teams.

### What to expect when you graduate

Employment opportunities continue to grow with more evidence about the benefits of exercise. Graduates are employed in a variety of health and fitness settings such as hospitals; sports medicine and rehabilitation centers; high schools, colleges and universities with sports teams; and various private businesses. Many graduates choose to pursue advanced degrees in specialized areas of exercise science, medicine or allied health.

Check out all our majors online @ [utoledo.edu/admission/majors.asp](http://utoledo.edu/admission/majors.asp)



# ATHLETIC TRAINING

Ever dreamed of working for a professional sports team? Athletic training (AT), a paramedical specialization that prevents, treats, cares for and rehabilitates patient injuries, can make that dream come true. AT students refine their clinical skills with supervision by physicians and certified athletic trainers to assist athletes. They are eligible for certification by the Board of Certification upon graduation and typically work in hospitals, clinics, industrial settings, secondary schools, colleges and universities.

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## Sample Curriculum\*

### FIRST YEAR

#### Fall Semester

KINE 1110 Intro to Athletic Training	2
ENGL 1110 English Composition I	3
HHS 1000 College Orientation	1
BIOL 2150 Fund of Life Science I	4
BIOL 2160 Fund of Life Science I Lab	1
MATH 1340 Algebra/Trigonometry	4
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

KINE 1650 Care and Prevention	3
KINE 1660 Athl Trn Taping Techniques	1
HEAL 1500 First Aid	2
KINE 2510 Human Anatomy	3
KINE 2520 Human Anatomy Lab	1
KINE 1700 Intro to Exercise Science	2
BIOL 2170 Fund of Life Science II	4
BIOL 2180 Fund of Life Science II Lab	1
<b>Total</b>	<b>17 hrs.</b>

### SECOND YEAR

#### Fall Semester

KINE 2610 Lower Extremity Evaluation	3
KINE 2710 Clin Skill Development I	2
CHEM 1230 General Chemistry I	4
CHEM 1280 General Chemistry I Lab	1
ENGL 2950 Tech Report Writing	3
Multicultural Elective	3
<b>Total</b>	<b>16 hrs.</b>

#### Spring Semester

KINE 2620 Upper Extremity Evaluation	3
KINE 2720 Clin Skill Development II	2
KINE 2530 Human Physiology	3
KINE 2540 Human Physiology Lab	1
PSY 1010 Principles of Psychology	3
COMM 1010 Communication Principles	3
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

KINE 4720 Clin Skill Development VI	4
KINE 4910 Senior Research Project	4
HEAL 4700 Nutritional Science	3
Multicultural Elective	3
Social Science Elective	3
<b>Total</b>	<b>17 hrs.</b>

### THIRD YEAR

#### Fall Semester

KINE 3630 Therapeutic Modalities	3
KINE 3710 Clin Skill Development III	3
KINE 3520 Applied Exercise Physiology	3
KINE 3530 Exercise Physiology Lab	1
KINE 3610 Medical Conditions	2
PHYS 2070 Physics- Mechanics	4
<b>Total</b>	<b>16 hrs.</b>

#### Spring Semester

KINE 3660 Rehab of Athletic Injury	3
KINE 3720 Clin Skill Development IV	3
KINE 2960 Growth, Dev & Motor Lrng	4
PHCL 2220 Drugs, Meds & Soc	3
Humanities/Fine Arts Elective	3
<b>Total</b>	<b>16 hrs.</b>

### FOURTH YEAR

#### Fall Semester

KINE 4650 Athletic Training Program	3
KINE 4710 Clin Skill Development V	3
HEAL 2500 Personal Health	3
KINE 4540 Applied Biomechanics	3
KINE 4550 Biomechanics Lab	1
MATH 2600 Introduction to Statistics	3
<b>Total</b>	<b>16 hrs.</b>

This program is now a major in the College of Health Science and Human Service and no longer a concentration under Exercise Science.

\*Sample curriculum is subject to change. Please consult the department for up-to-date information. For more detailed program requirements, visit [catalog.utoledo.edu](http://catalog.utoledo.edu).

# BIOMECHANICS

Biomechanics combines physics, math, engineering, anatomy, physiology, and computer science to study human movement. Biomechanists use knowledge and skills from these subjects to solve problems in sports medicine, rehabilitation, bioengineering and industry. Most graduates go on to pursue graduate degrees in biomechanics, athletic training, physical therapy, prosthetics, podiatry or medicine.

College of Health  
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## Sample Curriculum\*

### FIRST YEAR

#### Fall Semester

MATH 1850 Calculus I	4
ENGL 1110 Composition I	3
KINE 1700 Intro to Exercise Science	2
BIOL 2150 Fund of Life Science I	4
BIOL 2160 Fund of Life Science I Lab	1
HHS 1000 Orientation	1
Total	15 hrs.

#### Spring Semester

BIOL 2170 Fund of Life Science II	4
BIOL 2180 Fund of Life Science II Lab	1
MATH 1860 Calculus II	4
HEAL 1500 First Aid	2
EECS 1050 Intro to Comp in C/C++	2
Health Elective	3
Total	16 hrs.

### SECOND YEAR

#### Fall Semester

CHEM 1230 General Chemistry I	4
CHEM 1280 Chemistry I Lab	1
KINE 2510 Human Anatomy	3
KINE 2520 Anatomy Lab	1
PHYS 2130 Physics for Sci & Engr I	5
PSY 1010 Principles of Psychology	3
Total	17 hrs.

#### Spring Semester

KINE 2530 Human Physiology	3
KINE 2540 Human Physiology Lab	1
ENGL 2950 Tech Report Writing	3
PHYS 2140 Physics for Sci & Engr II	5
Humanities/Fine Arts Elective	3
Total	15 hrs.

### THIRD YEAR

#### Fall Semester

CIVE 1150 Engr Mechanics: Statics	3
KINE 2960 Growth, Dev & Motor Lrng	4
KINE 4540 Applied Biomechanics	3
KINE 4550 Biomechanics Lab	1
KINE 4990 Independent Study	3
Total	14 hrs.

#### Spring Semester

MIME 2300 Engr Dynamics	3
KINE 3520 Exercise Physiology	3
KINE 3530 Exercise Physiology Lab	1
KINE 3820 Sports Medicine/Coaches	3
KINE 4900 Human Performance Sem	3
COMM 3840 Interpersonal Comm	4
Total	17 hrs.

### FOURTH YEAR

#### Fall Semester

HEAL 4700 Nutritional Science	3
HEAL Health Elective	3
RESM 4100 Educational Statistics	3
KINE 4990 Independent Study	3
Multicultural Elective	3
Total	15 hrs.

#### Spring Semester

KINE 4910 Senior Project	4
KINE 4990 Independent Study	3
KINE Kinesiology Elective	3
Multicultural Elective	3
Social Science Elective	3
Total	16 hrs.

\*Sample curriculum is subject to change. Please consult the department for up-to-date information. For more detailed program requirements, visit [catalog.utoledo.edu](http://catalog.utoledo.edu).

# CLINICAL AND APPLIED PHYSIOLOGY

Clinical and applied physiology focuses on the use of exercise to treat disease and promote health and wellness. As part of the program, students may choose to complete an associate degree in cardiovascular technology. Graduates may become certified by the American College of Sports Medicine or the National Strength and Conditioning Association. They are employed in hospitals, private clinics, wellness and fitness centers, community agencies, businesses, and industries.

College of Health  
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## Sample Curriculum\*

### FIRST YEAR

#### Fall Semester

CHEM 1230 General Chemistry I	4
CHEM 1280 General Chemistry I Lab	1
KINE 1700 Intro to Exercise Science	2
ENGL 1110 College Composition I	3
MATH 1340 Algebra/Trigonometry	4
HHS Orientation	1
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

BIOL 2170 Fund of Life Science II	4
BIOL 2180 Fund of Life Science II Lab	1
KINE 2530 Human Physiology	3
KINE 2540 Human Physiology Lab	1
Social Science Elective	3
Health Elective	3 or 4
<b>Total</b>	<b>15-16 hrs.</b>

#### Spring Semester

KINE 4850 Clinical Exercise Testing	3
KINE 4860 Clinical Exercise Testing Lab	1
KINE 4940 Internship	4
Multicultural Elective	3
Health Elective	3
<b>Total</b>	<b>14 hrs.</b>

### Spring Semester

CHEM 1240 General Chemistry II	4
CHEM 1290 General Chemistry II Lab	1
ENGL 2950 Tech Report Writing	3
HEAL 1500 First Aid	2
Humanities Elective	3
Social Science Elective	3
<b>Total</b>	<b>16 hrs.</b>

### THIRD YEAR

#### Fall Semester

PHYS 2070 Physics I	5
CARD 1180 Cardiac Dysrhythmias	4
CARD 1190 Dysrhythmias Lab	1
KINE 3730 Fitness Instruction	2
KINE 3520 Exercise Physiology	3
KINE 3530 Exercise Physiology Lab	1
<b>Total</b>	<b>16 hrs.</b>

### Second Year

#### Fall Semester

BIOL 2150 Fund of Life Science I	4
BIOL 2160 Fund of Life Science I Lab	1
KINE 2510 Human Anatomy	3
KINE 2520 Human Anatomy Lab	1
KINE 2960 Growth, Dev & Motor Lrng	4
Multicultural Elective	3
<b>Total</b>	<b>16 hrs.</b>

#### Spring Semester

KINE 2580 Human Pathophysiology	3
CARD 1280 12-Lead Interpretation	4
CARD 1290 Lead Interpretation Lab	1
KINE 3820 Sports Medicine/Coaches	3
COMM 3840 Interpersonal Comm	4
<b>Total</b>	<b>15 hrs.</b>

### FOURTH YEAR

#### Fall Semester

KINE 4540 Biomechanics	3
KINE 4550 Biomechanics Lab	1
RESM 4100 Educational Statistics	3
KINE 4910 Senior Project	4
HEAL 4700 Nutritional Science	3
Health Elective	3
<b>Total</b>	<b>17 hrs.</b>

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# EXERCISE PHYSIOLOGY

Exercise physiology studies how the body's structures and functions are altered when an individual is exposed to exercise. Students use their knowledge to improve athletic performance, facilitate productivity and safety in the workplace, enhance health through exercise, and prevent and treat disease. Typically, graduates continue to graduate school in exercise physiology or other related fields like cardiovascular physiology, physical therapy or medicine.

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## Sample Curriculum\*

### FIRST YEAR

#### Fall Semester

ENGL 1110 English Composition I	3
CHEM 1230 General Chemistry I	4
CHEM 1280 General Chemistry I Lab	1
KINE 1700 Intro to Exercise Science	2
MATH 1340 Algebra/Trigonometry	4
HHS Orientation	1
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

PSY 1010 Principles of Psychology	3
CHEM 1240 General Chemistry II	4
CHEM 1290 General Chemistry II Lab	1
ENGL 2950 Tech Report Writing	3
HEAL 1500 First Aid	2
Humanities Elective	3
<b>Total</b>	<b>16 hrs.</b>

### SECOND YEAR

#### Fall Semester

KINE 2510 Human Anatomy	3
KINE 2520 Anatomy Lab	1
BIOL 2150 Fund of Life Science I	4
BIOL 2160 Fund of Life Science I Lab	1
Social Science Elective	3
General Elective	3
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

BIOL 2170 Fund of Life Science II	4
BIOL 2180 Fund of Life Science II Lab	1
KINE 2530 Human Physiology	3
KINE 2540 Human Physiology Lab	1
Multiculture Elective	3
General Elective	3
<b>Total</b>	<b>15 hrs.</b>

### THIRD YEAR

#### Fall Semester

KINE 3520 Exercise Physiology	3
KINE 3530 Exercise Physiology Lab	1
PHYS 2070 Physics I	5
Exercise Physiology Elective	3
General Elective	3
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

KINE 4540 Applied Biomechanics	3
KINE 4550 Applied Biomechanics Lab	1
KINE 4850 Clinical Exercise Test/Prog	3
KINE 4860 Clinical Exercise Test/Prog Lab	1
PHY 2080 Physics II	5
Multiculture Elective	3
<b>Total</b>	<b>16 hrs.</b>

### FOURTH YEAR

#### Fall Semester

RESM 4100 Educational Statistics	3
HEAL 4700 Nutritional Science	3
KINE 4560 Lab Tech in Ex Phys	3
KINE 4870 Exercise Biology	3
Exercise Physiology Elective	3
KINE 4990 Independent Study	3
<b>Total</b>	<b>18 hrs.</b>

#### Spring Semester

KINE 4910 Senior Research Project	4
COMM 3840 Interpersonal Comm	4
Exercise Physiology Electives	6
General Electives	3
<b>Total</b>	<b>17 hrs.</b>

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# KINESIOTHERAPY

Kinesiotherapy is the treatment of congenital defects, disease and injury through physical exercise and activity. Its goal is to improve the quality of life in children and adults by increasing muscular strength, flexibility, cardiovascular endurance, functional independence, and interpersonal relationships. Graduates work in hospitals, private clinics, schools, universities, and retirement centers.

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## Sample Curriculum\*

### FIRST YEAR

#### Fall Semester

ENGL 1110 English Composition I	3
KINE 1700 Intro to Exercise Science	2
HHS Orientation	1
CHEM 1230 General Chemistry I	4
CHEM 1280 General Chemistry I Lab	1
MATH 1340 Algebra/Trigonometry	4
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

HEAL 1500 First Aid	2
CHEM 1240 General Chemistry II	4
CHEM 1290 General Chemistry II Lab	1
KINE 3510 Intro to Kinesiotherapy	3
KINE 4940 KT Internship	2
PSY 1010 Principles of Psychology	3
<b>Total</b>	<b>15 hrs.</b>

### SECOND YEAR

#### Fall Semester

KINE 2510 Human Anatomy	3
KINE 2520 Anatomy Lab	1
CARD 1180 Cardiac Dysrhythmias	4
CARD 1190 Cardiac Dysrhythmias Lab	1
KINE 2960 Growth, Dev & Motor Lrng	4
ENGL 2950 Tech Report Writing	3
<b>Total</b>	<b>16 hrs.</b>

#### Spring Semester

KINE 2530 Human Physiology	3
KINE 2540 Human Physiology Lab	1
KINE 4570 Theory & Practice of Kinesiotherapy	3
KINE 4580 Kinesiotherapy Lab	1
PSY 2200 Abnormal Psychology	3
Humanities Elective	3
Multiculture Elective	3
<b>Total</b>	<b>17 hrs.</b>

### THIRD YEAR

#### Fall Semester

BIOL 2150 Fund of Life Science I	4
BIOL 2160 Fund of Life Science I Lab	1
KINE 4940 KT Internship	2
KINE 4540 Applied Biomechanics	3
KINE 4550 Applied Biomechanics Lab	1
KINE 4620 Therapeutic Kinesiology	3
KINE 4640 Neuro/Path of Rehab	3
<b>Total</b>	<b>17 hrs.</b>

#### Spring Semester

BIOL 2170 Fund of Life Science II	4
BIOL 2180 Fund of Life Science II Lab	1
KINE 3520 Applied Exercise Physiology	3
KINE 3530 Exercise Physiology Lab	1
KINE 4850 Clinical Exercise Prog	3
KINE 4860 Clinical Exercise Prog Lab	1
KINE 4940 KT Internship Prog Lab	3
<b>Total</b>	<b>16 hrs.</b>

### FOURTH YEAR

#### Fall Semester

PHYS 2070 Physics – Mechanics	5
HEAL 4560 Health Prob of Aging	3
COMM 3840 Interpersonal Comm	4
RESM 4100 Educational Statistics	3
<b>Total</b>	<b>15 hrs.</b>

#### Spring Semester

KINE 4910 Senior Research Project	4
HEAL 4700 Nutritional Science	3
KINE 4940 Internship	4
Multicultural Elective	3
Health Elective	3
<b>Total</b>	<b>17 hrs.</b>

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# PRE-PHYSICAL THERAPY

Pre-physical therapy students complete the same University core, science core and exercise science core requirements as all other students in exercise science. In addition, they complete courses that are specifically required for admission into graduate physical therapy programs. During their senior year at UT, they apply for admission to graduate programs that provide professional training in physical therapy, including the doctorate in physical therapy degree program at the University's Health Science Campus.

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## Sample Curriculum\*

### FIRST YEAR

#### Fall Semester

BIOL 2150 Fund of Life Science I	4
BIOL 2160 Fund of Life Science I Lab	1
MATH 1340 College Algebra/Trig	4
KINE 1700 Intro to Exercise Science	2
HHS Orientation	1
Humanities/Fine Arts Elective	3
Total	15 hrs.

#### Spring Semester

BIOL 2170 Fund of Life Science II	4
BIOL 2180 Fund of Life Science II Lab	1
PSY 1010 Principles of Psychology	3
HHS 2980 PMD Clinical	3
HEAL 1500 First Aid	2
ENGL 1110 English Comp I	3
Total	16 hrs.

### SECOND YEAR

#### Fall Semester

CHEM 1230 General Chemistry I	4
CHEM 1280 General Chemistry I Lab	1
KINE 2510 Human Anatomy	3
KINE 2520 Human Anatomy Lab	1
ENGL 2950 Tech Report Writing	3
Social Science Elective	3
Total	15 hrs.

#### Spring Semester

CHEM 1240 General Chemistry II	4
CHEM 1290 General Chemistry II Lab	1
KINE 2530 Human Physiology	3
KINE 2540 Human Physiology Lab	1
PSY 2200, 2500, 2510 or 2700	3
Multicultural Elective	3
Total	15 hrs.

### THIRD YEAR

#### Fall Semester

KINE 2960 Growth, Dev & Motor Lrng	4
KINE 3520 Applied Exercise Physiology	3
KINE 3530 Appl Exercise Physiol Lab	1
PHYS 2070 Physics I	5
HEAL 1800 Medical Terminology	3
Total	16 hrs.

#### Spring Semester

COMM 3840 Interpersonal Comm or	4
COMM 1010 Comm Prin & Practices	3
PHYS 2080 Physics II	5
KINE 4620 Therapeutic Kinesiology	3
KINE 2580 Pathophysiology	3
Pre-PT Elective	3
Total	17-18 hrs.

### FOURTH YEAR

#### Fall Semester

KINE 4540 Applied Biomechanics	3
KINE 4550 Applied Biomechanics Lab	1
RESM 4100 Educational Statistics	3
HEAL 4560 Health Problems of Aging	3
Pre-PT Elective	3
General Elective	3
Total	16 hrs.

#### Spring Semester

HEAL 4700 Nutritional Science	3
KINE 4640 Neuro and Patho of Rehab	3
KINE 4910 Senior Research Project	4
Multicultural Elective	3
Pre-PT Elective	3
Total	16 hrs.

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# EXERCISE SCIENCE

After a \$17 million building renovation, the College of Health Science and Human Service offers students fifteen mediated classrooms using StarBoard technology, two high-tech computer labs with 54 workstations and a completely wireless building.

College of Health  
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Group campus tours are available Monday through Friday at 10:30 a.m. or 2:30 p.m., and on Saturday at 11:15 a.m., year round, with the exception of national holidays. Individual admission appointments are available by request. Individualized college or department visits are also available weekdays at 1:15 p.m. by appointment.

[utoledo.edu/admission/campusvisit](http://utoledo.edu/admission/campusvisit)  
800.5TOLEDO

## Optional Concentration

All students who pursue the bachelor of science degree in exercise science are required to complete a block of courses and experiences in an area of specialization. Those who choose the optional program, as opposed to one of the structured specializations such as exercise physiology or kinesiotherapy, work with an adviser to design a customized specialization that meets their own unique interests and needs. Often these optional programs are designed to incorporate courses that may be required for admission into a graduate or professional degree program such as medicine, business or occupational therapy. The requirements for the optional program include courses, internships and independent study research approved by an adviser in the Department of Kinesiology. The total number of hours varies, depending on the design of the program.

### For more information about Exercise Science, contact:

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