EXERCISE SCIENCE MAJOR

Exercise Science is the study of physiological and functional adaptations to movement. The Exercise Science Major is a science-oriented curriculum that prepares students for graduate study in exercise science/kinesiology, athletic training, physical therapy, and related health fields. In addition, graduates may pursue careers as strength and conditioning specialists, cardiac technicians, individual and group exercise prescription specialists, and home-health care workers. The program requires and recommends coursework in health sciences as well as anatomy, chemistry, physics, statistics, physiology, and psychology, culminating in a practical hands-on internship experience.

All Exercise Science majors complete a 46-hour of Exercise Science Core (required courses) in addition to choosing at least one area of emphasis: Pre-Athletic Training, Pre-Occupational Therapy, Pre-Physical Therapy, and/or Kinesiology. Eighteen hours of major requirements meet general education requirements.

Program Outcomes:

Students graduating with a Bachelor of Arts degree in Exercise Science will be able to:

- demonstrate knowledge of the discipline
- evidence professional and personal development
- demonstrate interdisciplinary understanding
- evidence Christian faithfulness

Code | Title | Hours
--- | --- | ---
HS 161 | Medical Terminology | 1
HS 162 | Introduction to Interprofessional Health Sciences | 1
HS 165 | Responding to Emergencies and Sport Safety Training | 3
HS 168 | Prevention and Care of Athletic Injury | 3
HS 201 | Physiology of Exercise | 3
HS 202 | Nutrition | 3
HS 251 | Kinesiology | 3
HS 454 | Measurement, Research, Statistics and Technology | 3
HS 490 | Seminar in Interprofessional Health Sciences | 1

Health Sciences Courses

BIO 111 | General Biology | 4
BIO 340 | Human Anatomy and Physiology I | 4
BIO 341 | Human Anatomy and Physiology II | 4

CH 103 | Introduction to Chemistry | 4-8
OR General Chemistry I & II
CH 111 | General Chemistry I | 4
CH 112 | General Chemistry II | 4
CH 203 | Essentials of Organic Biochemistry | 4
PHY 111 | General Physics I | 4
PHY 112 | General Physics II | 4
MA 121 | Calculus and Analytic Geometry I | 4
HS 351 | Biomechanics | 3
HS 480 | Professional Rotation in Health Sciences | 1
or HS 5111 Athletic Training Clinical I

Pre-Athletic Training Emphasis

The Pre-Athletic Training Emphasis is designed to combine a solid theoretical science foundation with practical training needed to give students a competitive edge for continuing on to the graduate program in Athletic Training at TIU.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Pre-Athletic Training Emphasis</td>
<td>24-28</td>
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</tbody>
</table>

Select one option:

- CH 103 | Introduction to Chemistry |
- OR General Chemistry I & II
- CH 111 | General Chemistry I |
- CH 112 | General Chemistry II |
- CH 203 | Essentials of Organic Biochemistry |
- PHY 111 | General Physics I |
- PHY 112 | General Physics II |
- MA 121 | Calculus and Analytic Geometry I |
- HS 351 | Biomechanics |
- HS 480 | Professional Rotation in Health Sciences |
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Pre-Occupational Therapy Emphasis

The Pre-Occupational Therapy Emphasis is designed to combine a solid theoretical science foundation with the practical training needed to give students a competitive edge for acceptance to professional Occupational Therapy graduate programs.

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<tr>
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<tbody>
<tr>
<td>Pre-Occupational Therapy Emphasis</td>
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</tr>
</tbody>
</table>

Select one option:

- CH 103 | Introduction to Chemistry |
- OR General Chemistry I & II
- CH 111 | General Chemistry I |
- CH 112 | General Chemistry II |
- CH 203 | Essentials of Organic Biochemistry |
- PHY 111 | General Physics I |
- PHY 112 | General Physics II |
- MA 121 | Calculus and Analytic Geometry I |
- HS 351 | Biomechanics |
- HS 480 | Professional Rotation in Health Sciences |

Choose one:

- PSY 310 | Abnormal Psychology |
- PSY 335 | Child Development |
- PSY 337 | Psychology of Adolescence |
- PSY 339 | Adult Development |

Total Hours | 64-72 |

Highly Recommended Athletic Training courses

- BIO 310 | Microbiology |
- HS 365 | Motor Learning and Lifespan Development |
- HS 370 | Introduction to Therapeutic Modalities and Rehabilitation |
- HS 380 | Advanced Functional Anatomy |

Choose one:

- PSY 310 | Abnormal Psychology |
- PSY 335 | Child Development |
- PSY 337 | Psychology of Adolescence |

Total Hours | 64-72 |

Pre-Occupational Therapy Emphasis

The Pre-Occupational Therapy Emphasis is designed to combine a solid theoretical science foundation with practical training needed to give students a competitive edge for acceptance to professional Occupational Therapy graduate programs.

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- CH 103 | Introduction to Chemistry |
- OR General Chemistry I & II
- CH 111 | General Chemistry I |
- CH 112 | General Chemistry II |
- CH 203 | Essentials of Organic Biochemistry |
- PHY 111 | General Physics I |
- PHY 112 | General Physics II |
- MA 121 | Calculus and Analytic Geometry I |
- HS 351 | Biomechanics |
- HS 480 | Professional Rotation in Health Sciences |

Choose one:

- PSY 335 | Child Development |
- PSY 337 | Psychology of Adolescence |
PSY 339  Adult Development

Highly Recommended Pre-Occupational Therapy Courses

BIO 310  Microbiology
HS 365  Motor Learning and Lifespan Development
HS 370  Introduction to Therapeutic Modalities and Rehabilitation
PSY 310  Abnormal Psychology

Pre-Physical Therapy Emphasis

The Pre-Physical Therapy emphasis is designed to combine a solid theoretical science foundation with practical training needed to give students a competitive edge for acceptance to professional physical therapy programs.

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<tbody>
<tr>
<td>CH 111</td>
<td>General Chemistry I ¹</td>
<td>4</td>
</tr>
<tr>
<td>CH 112</td>
<td>General Chemistry II</td>
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<tr>
<td>MA 121</td>
<td>Calculus and Analytic Geometry I</td>
<td>4</td>
</tr>
<tr>
<td>HS 480</td>
<td>Professional Rotation in Health Sciences</td>
<td>1-6</td>
</tr>
<tr>
<td>BIO 410</td>
<td>Biology Seminar</td>
<td>1</td>
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</tbody>
</table>

Choose one:

- BIO 310  Microbiology
- BIO 320  Immunology
- & BIO 321  and Immunology Case Studies Laboratory
- BIO 430  Developmental Biology

Highly Recommended Pre-Physical Therapy Courses

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<tr>
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</thead>
<tbody>
<tr>
<td>HS 370</td>
<td>Introduction to Therapeutic Modalities and Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>HS 365</td>
<td>Motor Learning and Lifespan Development</td>
<td>3</td>
</tr>
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<td>Psychology of Adolescence</td>
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<td>PSY 339</td>
<td>Adult Development</td>
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Kinesiology Emphasis

The Kinesiology Emphasis is designed to prepare students with the tools necessary to become experts in the field of strength and conditioning, whether working with athletes, in a health club, or conducting research.

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<tr>
<td>CH 112</td>
<td>General Chemistry II</td>
<td></td>
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<tr>
<td>HPWA 104</td>
<td>Beginning Weight Training</td>
<td>1</td>
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<tr>
<td>HPWA 204</td>
<td>Advanced Weight Training</td>
<td>1</td>
</tr>
<tr>
<td>HPW 220</td>
<td>Practicum in Sport and Wellness Management</td>
<td>3</td>
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¹ Fulfills a general education requirement