## Major in Exercise Science

The major in Exercise Science is intended to examine the relationship between exercise and human performance and the role of physical activity in the promotion of healthy lifestyles. Exercise Science consists of several overlapping disciplines, including biomechanics, exercise physiology and biochemistry, growth and development, exercise nutrition, measurement and evaluation, and exercise psychology. The program of study is designed to provide an effective blend of classroom instruction and practical experience. The program is intended to prepare qualified individuals for careers in clinical, corporate, commercial, and/or community exercise/wellness settings as well as to prepare students for graduate study in related fields.

The requirements for the Exercise Science major include a minimum of 39 units of KNES courses and 26-27 units of courses outside of KNES for a total of 65-66 units. Minimum 50% of the units required for the major must be completed at Towson University.

### Code  Title  Units
<table>
<thead>
<tr>
<th>Requirements</th>
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<tbody>
<tr>
<td>Required Exercise Science Courses</td>
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<tr>
<td>KNES 265 FUNDAMENTALS IN HEALTH AND PHYSICAL FITNESS ASSESSMENT</td>
<td>3</td>
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<tr>
<td>KNES 297 FOUNDATIONS OF EXERCISE SCIENCE</td>
<td>3</td>
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<tr>
<td>KNES 313 PHYSIOLOGY OF EXERCISE</td>
<td>3</td>
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<tr>
<td>KNES 361 EXERCISE PSYCHOLOGY</td>
<td>3</td>
<td></td>
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<tr>
<td>or KNES 355 PSYCHOLOGY OF SPORT</td>
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<tr>
<td>KNES 364 CLINICAL EXERCISE ASSESSMENT AND PRESCRIPTION</td>
<td>3</td>
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<tr>
<td>KNES 367 QUANTITATIVE RESEARCH METHODS</td>
<td>3</td>
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<tr>
<td>KNES 469 ADVANCED WRITING FOR RESEARCH IN EXERCISE SCIENCE</td>
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<tr>
<td>Select one of the following courses:</td>
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<td>3</td>
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<tr>
<td>KNES 311 BIOMECHANICS</td>
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<tr>
<td>KNES 341 CONCEPTS OF MOTOR LEARNING</td>
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<tr>
<td>KNES 217 FUNCTIONAL ANATOMY FOR EXERCISE SCIENCE</td>
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<tr>
<td>Electives, Select from the following:</td>
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<tr>
<td>KNES 217 FUNCTIONAL ANATOMY FOR EXERCISE SCIENCE</td>
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<tr>
<td>KNES 299 RESISTANCE TRAINING: TECHNIQUES AND PRINCIPLES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KNES 311 BIOMECHANICS</td>
<td></td>
<td></td>
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<tr>
<td>KNES 315 CARE AND PREVENTION OF ATHLETIC INJURIES</td>
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<tr>
<td>KNES 318 SCIENTIFIC FOUNDATIONS OF STRENGTH TRAINING AND CONDITIONING</td>
<td></td>
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<tr>
<td>KNES 321 SCIENCE OF SPORT SUCCESS: CONTRIBUTIONS OF GENETICS AND PRACTICE</td>
<td></td>
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<tr>
<td>KNES 328 TESTS AND ASSESSMENTS FOR FITNESS AND ATHLETIC PERFORMANCE</td>
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<tr>
<td>KNES 341 CONCEPTS OF MOTOR LEARNING</td>
<td></td>
<td></td>
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<tr>
<td>KNES 355 PSYCHOLOGY OF SPORT</td>
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<tr>
<td>KNES 359 PSYCHOLOGY OF SPORT INJURY</td>
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<table>
<thead>
<tr>
<th>Code  Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>KNES 361 EXERCISE PSYCHOLOGY</td>
<td></td>
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<tr>
<td>KNES 363 NUTRITION FOR EXERCISE AND SPORT</td>
<td></td>
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<tr>
<td>KNES 369 CLINICAL COMPETENCIES AND FIELDWORK IN EXERCISE SCIENCE</td>
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<tr>
<td>KNES 371 FIELD EXPERIENCE IN EXERCISE SCIENCE</td>
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<tr>
<td>KNES 372 PRACTICAL AND INSTRUCTIONAL SKILLS IN EXERCISE LEADERSHIP</td>
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<tr>
<td>KNES 396 INDEPENDENT STUDY</td>
<td>2</td>
</tr>
<tr>
<td>KNES 398 INTERNSHIP IN EXERCISE SCIENCE</td>
<td>2</td>
</tr>
<tr>
<td>KNES 406 EXERCISE PRESCRIPTIONS AND PROGRAMMING FOR SPECIAL POPULATIONS</td>
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<tr>
<td>KNES 407 ADVANCED PRINCIPLES OF STRENGTH AND CONDITIONING: PROGRAM DESIGN</td>
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<tr>
<td>KNES 409 STRESS MANAGEMENT, TENSION CONTROL AND HUMAN PERFORMANCE</td>
<td></td>
</tr>
<tr>
<td>KNES 420 ADVANCED EXERCISE PHYSIOLOGY</td>
<td></td>
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<tr>
<td>KNES 426 MOTOR DEVELOPMENT: INFANTS TO ADULTS</td>
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<tr>
<td>KNES 433</td>
<td></td>
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<tr>
<td>KNES 455 PHYSICAL ACTIVITY PROGRAMMING FOR THE OLDER ADULT</td>
<td></td>
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<tr>
<td>KNES 457 PHYSIOLOGY OF AGING</td>
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<tr>
<td>Additional Required Courses</td>
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</tr>
<tr>
<td>BIOL 191 &amp; 191L INTRODUCTORY BIOLOGY FOR HEALTH PROFESSIONS [LECTURE] and INTRODUCTORY BIOLOGY FOR HEALTH PROFESSIONS [LAB]</td>
<td>4</td>
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<tr>
<td>BIOL 221 &amp; 221L HUMAN ANATOMY &amp; PHYSIOLOGY I [LECTURE] and HUMAN ANATOMY &amp; PHYSIOLOGY I [LAB]</td>
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<tr>
<td>BIOL 222 &amp; 222L HUMAN ANATOMY &amp; PHYSIOLOGY II [LECTURE] and HUMAN ANATOMY &amp; PHYSIOLOGY II [LAB]</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>CHEM 121 &amp; 121L ALLIED HEALTH CHEMISTRY I LECTURE and ALLIED HEALTH CHEMISTRY I LABORATORY</td>
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<tr>
<td>CHEM 131 &amp; 131L GENERAL CHEMISTRY I LECTURE and GENERAL CHEMISTRY I LABORATORY</td>
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<tr>
<td>HLTH 101 WELLNESS FOR A DIVERSE SOCIETY</td>
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<tr>
<td>PHYS 202 GENERAL PHYSICS FOR THE HEALTH SCIENCES</td>
<td>4-5</td>
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<tr>
<td>or PHYS 211 GENERAL PHYSICS I; NON CALCULUS-BASED</td>
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<tr>
<td>PSYC 101 INTRODUCTION TO PSYCHOLOGY</td>
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<tr>
<td>Total Units</td>
<td>65-66</td>
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</table>

1 Electives cannot be satisfied by courses counted elsewhere in the curriculum.

2 No more than 9 units total of KNES 371, KNES 396, and KNES 398 can be taken toward the 15 units of elective coursework.
## Suggested Four-Year Plan

Based on course availability and student needs and preferences, the selected sequences will probably vary from those presented below. Students should consult with their adviser to make the most appropriate elective choices.

### Freshman

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Units Term 2</th>
<th>Term 2</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BIOL 191 &amp; 191L (Core 7)</td>
<td>4 HLTH 101 (Core 11)</td>
<td>3</td>
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<tr>
<td>PSYC 101 (Core 6)</td>
<td>3 KNES 297</td>
<td>3</td>
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<tr>
<td>Core 1 (or Core 2)</td>
<td>3 MATH 115 (Suggested: Core 3)</td>
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<tr>
<td>Core 4</td>
<td>3 Core 2 (or Core 1)</td>
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<tr>
<td>Core 5</td>
<td>3 Core 10</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>15</strong></td>
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### Sophomore

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Units Term 2</th>
<th>Term 2</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 221 &amp; 221L</td>
<td>4 BIOL 222 &amp; 222L</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>KNES 355 or 361</td>
<td>3 KNES 265</td>
<td>3</td>
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<tr>
<td>KNES 367</td>
<td>3 Select one of the following:</td>
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<tr>
<td>Core 12</td>
<td>3 KNES 217</td>
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<tr>
<td>Core 13</td>
<td>3 KNES 311</td>
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<tr>
<td>Core 14</td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>13</strong></td>
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### Junior

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Units Term 2</th>
<th>Term 2</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>EXSC Elective</td>
<td>3 EXSC Elective</td>
<td>3</td>
<td></td>
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<tr>
<td>EXSC Elective</td>
<td>3 EXSC Elective</td>
<td>3</td>
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</tr>
<tr>
<td>KNES 313</td>
<td>3 KNES 364</td>
<td>3</td>
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<tr>
<td>PHYS 202 or 211 (Core 8)</td>
<td>5 Select one of the following:</td>
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<tr>
<td></td>
<td>CHEM 121 &amp; 121L</td>
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<tr>
<td></td>
<td>CHEM 131 &amp; 131L</td>
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<tr>
<td></td>
<td>Elective</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>16</strong></td>
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### Senior

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Units Term 2</th>
<th>Term 2</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>EXSC Elective</td>
<td>3 KNES 469 (Core 9)</td>
<td>3</td>
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</tr>
<tr>
<td>Elective</td>
<td>3 Elective</td>
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<td>Elective</td>
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<td><strong>Total</strong></td>
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</tbody>
</table>

Total Units 120

1. Demonstrate extensive content knowledge from across the discipline of Exercise Science, including exercise psychology, biomechanics and exercise physiology (Information Literacy Competency).

2. Demonstrate skill in using technology necessary for conducting fitness assessments, interpreting fitness data, and developing appropriate exercise prescriptions (Technological Competency).

3. Demonstrate skill in leading individual and group exercise programs.

4. Demonstrate skill in educating and/or counseling patients/clients regarding physical activity and lifestyle changes.