## Health & Human Development

### Exercise Science Option

#### Four-Year Plan

<table>
<thead>
<tr>
<th>Name</th>
<th>2015-2016 Catalog</th>
<th>Advisor</th>
<th>E-mail</th>
<th>Updated 05/12/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="http://www.montana.edu/hhd/">www.montana.edu/hhd/</a></td>
</tr>
</tbody>
</table>

### Freshman Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Subject</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC 160</td>
<td>University Core</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CHMY 141</td>
<td>College Chemistry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CHMY 143</td>
<td>College Chemistry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>M 161Q</td>
<td>Survey of Calculus</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PSYX 100IS</td>
<td>Introductory Psychology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>UC</td>
<td>University Core &amp; Electives</td>
<td>9-11</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

### Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Subject</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOH 201</td>
<td>Human Anatomy &amp; Physiology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>KIN 105</td>
<td>Foundations of Exercise Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>NUTR 221CS</td>
<td>Basic Human Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>STAT 216Q</td>
<td>Introduction to Statistics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>STAT 217Q</td>
<td>Intermediate Statistical Concepts</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Take one of the following sequences:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHSX 205</td>
<td>College Physics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHSX 207</td>
<td>College Physics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHSX 220</td>
<td>Physics I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHSX 222</td>
<td>Physics II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>UC</td>
<td>University Core &amp; Electives</td>
<td>4-7</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Subject</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOH 211</td>
<td>Human Anatomy &amp; Physiology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>FCS 371</td>
<td>Research Methods in HHD</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>KIN 320</td>
<td>Exercise Physiology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>KIN 322</td>
<td>Kinesiology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>KIN 325R</td>
<td>Biomechanics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>UC</td>
<td>University Core &amp; Approved Electives</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Subject</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN 415</td>
<td>Advanced Exercise Testing &amp; Prescription</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>KIN 490R</td>
<td>Undergraduate Research</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>KIN 498</td>
<td>Internship</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>UC</td>
<td>University Core and Approved Electives</td>
<td>24-28</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

**Take one of the following:**

Students must also satisfy these requirements (See back of this page for list of pre-approved electives)

- Approved upper division HHD electives \( \geq 15 \)
- Approved upper division science electives \( \geq 29 \)
- Approved upper division social science electives \( \geq 6 \)

A grade of “C” or higher is required in all courses as outlined in the major.

### Check List for Graduation

1. Minimum credits required to graduate (120)
2. Approved upper division credits (\( >300 \) level, min 42)
3. University Core completed
## Exercise Science Option - Prerequisites for Required Courses and Approved Electives

<table>
<thead>
<tr>
<th>Classification</th>
<th>Rubric</th>
<th>#</th>
<th>Class Title</th>
<th>Credits</th>
<th>sem</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOH</td>
<td>201</td>
<td></td>
<td>Human Anatomy and Physiology I</td>
<td>5</td>
<td>FSM</td>
<td>CHMY 121, 141, or 151</td>
</tr>
<tr>
<td>BIOH</td>
<td>211</td>
<td></td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>FS</td>
<td>BIO 201, BIOL 260 or BIOM 360</td>
</tr>
<tr>
<td>CHMY</td>
<td>141</td>
<td></td>
<td>College Chemistry I</td>
<td>4</td>
<td>FSM</td>
<td>Math 121 or higher</td>
</tr>
<tr>
<td>CHMY</td>
<td>143</td>
<td></td>
<td>College Chemistry II</td>
<td>4</td>
<td>FSM</td>
<td>CHMY 141 or 151</td>
</tr>
<tr>
<td>FCS</td>
<td>371</td>
<td></td>
<td>Research Methods</td>
<td>3</td>
<td>FSM</td>
<td>Math CORE complete</td>
</tr>
<tr>
<td>KIN</td>
<td>105</td>
<td></td>
<td>Foundations of Exercise Science</td>
<td>3</td>
<td>FS</td>
<td>BIO 201 or KIN 221 &amp; Math CORE</td>
</tr>
<tr>
<td>KIN</td>
<td>322</td>
<td></td>
<td>Kinesiology</td>
<td>4</td>
<td>FS</td>
<td>BIO 201 or KIN 221</td>
</tr>
<tr>
<td>KIN</td>
<td>330</td>
<td></td>
<td>Exercise Physiology</td>
<td>4</td>
<td>FS</td>
<td>BIO 201 or KIN 221</td>
</tr>
<tr>
<td>KIN</td>
<td>325R</td>
<td></td>
<td>Biomechanics</td>
<td>4</td>
<td>FSM</td>
<td>M 121 or Placement test</td>
</tr>
<tr>
<td>M</td>
<td>161</td>
<td></td>
<td>Survey of Calculus</td>
<td>4</td>
<td>FSM</td>
<td>M 151</td>
</tr>
<tr>
<td>PHSX</td>
<td>205</td>
<td></td>
<td>College Physics I</td>
<td>4</td>
<td>FSM</td>
<td>PHSX 205 or PHSX 220</td>
</tr>
<tr>
<td>PHSX</td>
<td>207</td>
<td></td>
<td>College Physics II</td>
<td>4</td>
<td>FSM</td>
<td>M 121 or Placement test</td>
</tr>
<tr>
<td>STAT</td>
<td>216</td>
<td></td>
<td>Introduction to Statistics</td>
<td>3</td>
<td>FSM</td>
<td>STAT 217</td>
</tr>
<tr>
<td>STAT</td>
<td>217</td>
<td></td>
<td>Intermediate Statistics</td>
<td>3</td>
<td>FSM</td>
<td>STAT 217</td>
</tr>
<tr>
<td>KIN</td>
<td>415</td>
<td></td>
<td>Exercise Testing &amp; Prescription</td>
<td>4</td>
<td>S</td>
<td>KIN 320 and STAT 216</td>
</tr>
<tr>
<td>KIN</td>
<td>490</td>
<td></td>
<td>Undergraduate Research</td>
<td>2-6</td>
<td>FSM</td>
<td>Consent of instructor</td>
</tr>
<tr>
<td>KIN</td>
<td>498</td>
<td></td>
<td>Internship</td>
<td>2-6</td>
<td>FSM</td>
<td>Consent of instructor &amp; Jr. Standing</td>
</tr>
</tbody>
</table>

**Take one of the following**

### HHD Electives - 21 credits

| CHTH | 317 | Health Behavior Theories | 3 | FS | PSYX 100 and SOCI 101 |
| CHTH | 435 | Human Response to Stress | 3 | FSM | Junior standing |
| CHTH | 440 | Principles of Epidemiology | 3 | F | FCS 371 and CHTH 210 or KIN 105 |
| HADM | 445 | Health Administration | 3 | S | FCS 263 or CHTH 210 or KIN 105 |
| HTH  | 455 | Ethic of Care | 3 | FSM | FCS 101, PSYX 100 or SOCI 101 |
| KIN  | 410 | Advanced Strength Tr. & Cond. | 3 | FS | KIN 320 |
| KIN  | 440R| Sport Psychology | 3 | F | FCS 371 |
| KIN  | 415 | Advanced Exercise Testing & Prescr. | 4 | S | KIN 320 and STAT 216 |
| KIN  | 491#| Phys. Fitness Prog Des & Del | 3 | OD | KIN 320 |
| KIN  | 491#| Phys. Performance Assessments | 3 | OD | KIN 320 & KIN 322 |
| NUTR | 321| Life Cycle Nutrition | 3 | F | NUTR 221 |
| NUTR | 351| Nutrition and Society | 3 | F | NUTR 221 |
| NUTR | 411| Nutrition for Sport & Exercise | 3 | FS | NUTR 221 and KIN 221 or BIOH 201 |
| NUTR | 421| Macronutrient Metabolism | 3 | S | NUTR 221, BCH 380 and BIOH 211 |
| NUTR | 422| Macronutrient Metabolism II | 3 | F | NUTR 221, BCH 380 and BIOH 211 |
| NUTR | 425| Medical Nutrition Therapy | 3 | F | NUTR 221, 321, 401, BCH 380 and BIOH 211 |

### Science Electives - 3 credits

| BCH  | 380 | General Biochemistry | 5 | FSM | BIOH 320 and BIOH 211; CHMY 332 or 333 or 211 |
| BIOB | 375 | General Genetics | 3 | FS | BIO 160, 260 and 360 |
| BIOB | 377 | Practical Genetics | 3 | S | BIO 260 |
| BIOB | 425 | Advanced Cell & Mol Biology | 3 | F | BIO 260 & BCH 380 and BIB 375 or BIOH 320 |
| BIOH | 313 | Neurophysiology | 3 | F | BIO 256 and BIO 260 |
| BIOH | 411 | Advanced Human Anatomy | 4 | F | Sr standing & completion of 2 upper div BIO’s |
| BIOH | 412 | Animal Physiology | 3 | FS | BIO 260 and CHMY 211 or 321 or 123 |
| BIOB | 361 | Microbiology | 3 | SM | CHMY 143 or 153 |
| CHMY | 321 | Organic Chemistry I | 4 | F | CHMY 321 |
| CHMY | 323 | Organic Chemistry II | 4 | F | WRIT 101, EIND 142 for IE Majors |
| EIND | 313 | Work Design and Analysis | 3 | F | Jr Standing; EIND 313 for IE Majors |
| EIND | 413 | Ergonomics and Human Factors Eng. | 3 | F | Jr Standing; EIND 313 for IE Majors |

### Social Science Electives - 6 credits

| PHL  | 321 | Bio-Medical Ethics | 3 | OD | Prior course in PHL |
| PHL  | 345 | Philosophy of Science | 3 | F | Prior course in PHL |
| PHL  | 353 | Philosophy of Technology | 3 | OD | Prior course in PHL |
| PSYX | 350 | Physiological Psychology | 3 | F | PSYX 100 and BIOL 100, 102 or BCHM 304 |
| PSYX | 376 | Behavior Modification | 3 | F | PSYX 226 and PSYX 270 or PSYX 370 |
| PSYX | 380 | Memory and Cognition | 3 | FS | Jr standing, PSYX 100 |
| PSYX | 340 | Abnormal Psychology | 3 | F | PSYX 100 |
| SOCI | 380 | Soc of Health and Medicine | 3 | S odd | SOCI 101 |

**All Substitutions MUST be PRE-Approved!! Absolutely NO Exceptions!!!

† If this course is NOT taken as a “required” course it may count as an “HHD elective”.

# Permanent number yet to be assigned.

Graduate courses listed below maybe taken as upper division HHD electives, however, the following rules apply:

1) Students must have senior status and GPA ≥ 3.25; and 2) Graduate courses taken to fulfill undergraduate degree requirements may not be counted toward a graduate degree, i.e. students planning to pursue a Master of Science in HHD at MSU should be cautious about taking graduate courses.

NUTR 511: Exercise Metab. & Health 3 cr, S; KIN 545: Graduate Ex Phys 3 cr, F; KIN 515: Exercise Perf & Nutrition 3 cr, F