

# EXERCISE AND HEALTH SCIENCES MAJOR

## Program Curriculum

Code	Title	Credits
<b>Degree Core Requirements</b>		
HNFE 1114	Orientation to HNFE	1
HNFE 1004	Foods, Nutrition And Exercise (C) <sup>1</sup>	3
BIOL 1105	Principles of Biology <sup>1</sup>	3
BIOL 1115	Principles of Biology Laboratory <sup>1</sup>	1
BIOL 1106	Principles of Biology <sup>1</sup>	3
BIOL 1116	Principles of Biology Laboratory <sup>1</sup>	1
HNFE 2014	Nutrition Across the Life Span <sup>1</sup>	3
	or HNFE 2014HNutrition Across the Life Span	
HNFE 2484	Evidence-Based Practice in Health Science <sup>1</sup>	1
BMSP 2135	Human Anatomy & Physiology <sup>1</sup>	3
BMSP 2136	Human Anatomy and Physiology <sup>1</sup>	3
HNFE 2804	Exercise and Health <sup>1</sup>	3
CHEM 2514	Survey of Organic Chemistry (C-) <sup>1</sup>	3
	or CHEM 2535 Organic Chemistry	
BCHM 2024	Concepts of Biochemistry <sup>1</sup>	3
	or BCHM 3114 Biochemistry for Biotechnology and the Life Sciences	
	or BCHM 4115 General Biochemistry	
HNFE 3034	Methods of Human Health Assessment <sup>1</sup>	2
HNFE 4025	Macronutrient Metabolism <sup>1</sup>	3
HNFE 4026	Micronutrient Metabolism <sup>1</sup>	3
Subtotal		39
<b>Major Requirements <sup>1</sup></b>		
Group A: all courses required		
BMSP 2145	Human Anatomy and Physiology Laboratory	1
BMSP 2146	Human Anatomy and Physiology Laboratory	1
HNFE 3804	Exercise Physiology	3
Select one of the following:		2
HNFE 4964	Field Study (Pass/Fail only )	
HNFE 4974	Independent Study	
HNFE 4994	Undergraduate Research	
	or HNFE 4994Undergraduate Research	
HNFE 3954	Study Abroad	
HNFE 4954	Study Abroad	
Subtotal		7
<b>Group B: Science Foundations <sup>1</sup></b>		
Complete a minimum of 4 credit hours from the following:		4
BIOL 2604	General Microbiology	
BIOL 2614	General Microbiology Laboratory	
CHEM 2536	Organic Chemistry	
CHEM 2545	Organic Chemistry Laboratory	
CHEM 2546	Organic Chemistry Laboratory	
PHYS 2205	General Physics	
	or PHYS 230 Foundations of Physics	
PHYS 2206	General Physics	

or PHYS 230 Foundations of Physics	
PHYS 2215	General Physics Laboratory
PHYS 2216	General Physics Laboratory
<b>Group C: HNFE Electives <sup>1</sup></b>	
Complete a minimum of 15 credit hours. 9 credits must be at the 3000-4000 level with at least one designated Capstone.	
HNFE 1804	Principles of Sport Science
HNFE 2104	Moving Body, Moving Mind <sup>3</sup>
HNFE 2204	Medical Terminology
FST 2014	Introduction to Food Science
HNFE 3024	Science of Food Prep Lab
HNFE 2314	Active Transportation for a Healthy, Sustainable Planet <sup>3</sup>
HNFE 2334	Introduction to Integrative Health
HNFE 2544	Functional Foods for Health
HNFE 2664	Behavioral Theory in Health Promotion <sup>3</sup>
HNFE 2774	Topics in HNFE <sup>4</sup>
HNFE 2824	Prevention and Care of Athletic Injuries
HNFE 3634	Epidemiologic Concepts of Health and Disease
HNFE 3824	Kinesiology
HNFE 4174	Nutrition and Physical Performance
HNFE 4644	Health Counseling
HNFE 4754	Advanced Human Anatomy and Pathophysiology
HNFE 4814	Advanced Athletic Injuries
<b>Capstone. Must have at least one course.</b>	
HNFE 4004	Seminar in HNFE: Writing and Discourse in the Major
HNFE 4114	Food and Nutritional Toxicology
HNFE 4224	Alternative and Complementary Nutrition Therapies
HNFE 4354	Dietary Supplements and Health
HNFE 4514	Nutritional Genomics
HNFE 4774	Advanced Contemporary Topics in HNFE <sup>4</sup>
HNFE 4824	Advanced Kinesiology
HNFE 4844	Exercise and Neuromuscular Performance
Subtotal	18-20
<b>Free Electives</b>	
Select remaining credit hours required to fulfill degree requirements.	
Subtotal	12
<b>Pathways to General Education</b>	
<b>Pathways Concept 1 - Discourse</b>	
ENGL 1105	First-Year Writing (1F) <sup>2</sup>
	or COMM 1015 Communication Skills
ENGL 1106	First-Year Writing (1F) <sup>2</sup>
	or COMM 1016 Communication Skills
COMM 2004	Public Speaking (1A) <sup>2</sup>
	or ALCE 3634 Communicating Ag and Life Sciences in Speaking
<b>Pathways Concept 2 - Critical Thinking in the Humanities</b>	
Select six credits in Pathway 2 ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G02">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G02</a> )	
<b>Pathways Concept 3 - Reasoning in the Social Sciences</b>	
PSYC 1004	Introductory Psychology

Select three credits in Pathway 3 ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G03">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G03</a> )	3
<i>Pathways Concept 4 - Reasoning in the Natural Sciences</i>	
CHEM 1035 General Chemistry (C-) <sup>1</sup>	3
or CHEM 1055 General Chemistry for Chemistry Majors	
CHEM 1045 General Chemistry Laboratory <sup>1</sup>	1
or CHEM 1065 General Chemistry for Chemistry Majors Lab	
CHEM 1036 General Chemistry (C-) <sup>1</sup>	3
or CHEM 1056 General Chemistry for Chemistry Majors	
CHEM 1046 General Chemistry Laboratory <sup>1</sup>	1
or CHEM 1066 General Chemistry for Chemistry Majors Lab	
<i>Pathways Concept 5 - Quantitative and Computational Thinking</i>	
MATH 1025 Elementary Calculus (5F)	3
or MATH 1225 Calculus of a Single Variable	
or ISC 1105 Integrated Science I	
STAT 3615 Biological Statistics (5A)	3
Select 3 credits of Pathway 5a ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G05A">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G05A</a> ) or Pathway 5f ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G05F">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G05F</a> )	3
<i>Pathways Concept 6 - Critique and Practice in Design and the Arts</i>	
Select three credits in Pathway 6a ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06A">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06A</a> )	3
Select three credits in Pathway 6d ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06D">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06D</a> )	3
<i>Pathways Concept 7 - Critical Analysis of Identity and Equity in the United States</i> <sup>5</sup>	
Subtotal	44
<b>Total Credits</b>	<b>120-122</b>

<sup>1</sup> Included in in-major GPA.

<sup>2</sup> Credit cannot be received for both COMM 1016 and COMM 2004 if COMM 1015-COMM 1016 was taken for Concept 1f.

<sup>3</sup> Course is part of Pathways General Education and can be counted in both locations.

<sup>4</sup> Topics in HNFE (2774 and 4774) are not taught on a regular basis.

<sup>5</sup> Select course that meets Concept 7 and another Concept. If course meets only Concept 7, Pathways credit reaches 47

**Satisfactory Progress Towards the Degree:** An HNFE (Exercise and Health Sciences) student will be considered to have made satisfactory progress toward the degree when:

1. Overall GPA  $\geq 2.50$ .
2. A minimum grade of "C" is required in HNFE 1004 Foods, Nutrition And Exercise and a "C-" or better is required in CHEM 1035 General Chemistry and CHEM 1036 General Chemistry and CHEM 2535 Organic Chemistry or CHEM 2514 Survey of Organic Chemistry.
3. These courses must be completed by the time the student has attempted 72 hours:

BIOL 1105 Principles of Biology-BIOL 1106 Principles of Biology or equivalent.

CHEM 1035 General Chemistry-CHEM 1036 General Chemistry or equivalent.

CHEM 2535 Organic Chemistry or CHEM 2514 Survey of Organic Chemistry.

HNFE 1004 Foods, Nutrition And Exercise.

## Graduation Requirements

**Note:** Completion of this major does NOT qualify a student to apply to an Accreditation Council for Education in Nutrition and Dietetics (ACEND) accredited Dietetic Internship.

Graduation Requirement: Overall GPA  $\geq 2.50$ .

A minimum grade of "C" is required in HNFE 1004 Foods, Nutrition And Exercise and a "C-" or better is required in CHEM 1035 General Chemistry and CHEM 1036 General Chemistry and CHEM 2535 Organic Chemistry or CHEM 2514 Survey of Organic Chemistry.

## Foreign Language Requirement

A sequence of two foreign language courses is required for graduation unless two years of high school credits of the same foreign language or six transfer credits of one foreign language have been earned. These credits do not count towards graduation.

The course plan below is one example of how a student might complete the program requirements of the Exercise and Health Sciences curriculum. Many different course plans are possible, and a student's specific plan for completing the required courses and 120 credits will vary. Students should work with their academic advisor to tailor an individualized course plan.

### First Year

Fall Semester		Credits
BIOL 1105	Principles of Biology	3
BIOL 1115	Principles of Biology Laboratory	1
ENGL 1105	First-Year Writing	3
HNFE 1004	Foods, Nutrition And Exercise	3
HNFE 1114	Orientation to HNFE	1
MATH 1025	Elementary Calculus (or MATH 1014 if not ready for calculus)	3
<b>Credits</b>		<b>14</b>

### Spring Semester

BIOL 1106	Principles of Biology	3
BIOL 1116	Principles of Biology Laboratory	1
CHEM 1035	General Chemistry	3
CHEM 1045	General Chemistry Laboratory	1
ENGL 1106	First-Year Writing	3
Major Electives <sup>Group C</sup>		3
Pathways Concept 5 - Quantitative and Computational Thinking		3
<b>Credits</b>		<b>17</b>

### Second Year

Fall Semester		
BMSP 2135	Human Anatomy & Physiology	3
BMSP 2145	Human Anatomy and Physiology Laboratory	1
HNFE 2484	Evidence-Based Practice in Health Science	1
PSYC 1004	Introductory Psychology	3

Major Electives <sup>Group B</sup>	1
Free Electives	3
<b>Credits</b>	<b>12</b>
<b>Spring Semester</b>	
BMSP 2136 Human Anatomy and Physiology	3
BMSP 2146 Human Anatomy and Physiology Laboratory	1
CHEM 1036 General Chemistry	3
CHEM 1046 General Chemistry Laboratory	1
COMM 2004 Public Speaking	3
or ALCE 3634 or Communicating Ag and Life Sciences in Speaking	
HNFE 2014 Nutrition Across the Life Span	3
or HNFE 2014H or Nutrition Across the Life Span	
HNFE 4964 Field Study	1
or HNFE 4974 or Independent Study	
or HNFE 4994 or Undergraduate Research	
or HNFE 4994H or Undergraduate Research	
or HNFE 3954 or Study Abroad	
or HNFE 4954 or Study Abroad	
Pathways Concept 6 - Critique and Practice in Design and the Arts	3
<b>Credits</b>	<b>18</b>
<b>Third Year</b>	
<b>Fall Semester</b>	
CHEM 2514 Survey of Organic Chemistry	3
or CHEM 2535 or Organic Chemistry	
Major Electives <sup>Group C</sup>	3
HNFE 2804 Exercise and Health	3
Pathways Concept 3 - Reasoning in the Social Sciences	3
Free Electives	3
<b>Credits</b>	<b>15</b>
<b>Spring Semester</b>	
BCHM 2024 Concepts of Biochemistry	3
HNFE 3804 Exercise Physiology	3
Major Electives <sup>Group C</sup>	3
Pathways Concept 2 - Critical Thinking in the Humanities	3
HNFE Science Foundations <sup>Group B</sup>	3
<b>Credits</b>	<b>15</b>
<b>Fourth Year</b>	
<b>Fall Semester</b>	
Major Electives <sup>Group C</sup>	3
HNFE 4025 Macronutrient Metabolism	3
HNFE 3034 Methods of Human Health Assessment	2
Pathways Concept 7 - Critical Analysis of Identity and Equity in the United States	3
Pathways Concept 2 - Critical Thinking in the Humanities <sup>select course that meets Concept 7 and Concept 2</sup>	
Free Electives	3
<b>Credits</b>	<b>14</b>
<b>Spring Semester</b>	
Major Electives <sup>Group C-Capstone</sup>	3
STAT 3615 Biological Statistics	3
HNFE 4026 Micronutrient Metabolism (or HNFE 4027 Exercise Metabolism and Disease)	3
Pathways Concept 6 - Critique and Practice in Design and the Arts	3
Free Electives	3
<b>Credits</b>	<b>15</b>
<b>Total Credits</b>	<b>120</b>