Human Physiology and Translational Sciences Professional Program

To enter the Human Physiology and Translational Sciences program, students are required to have a minimum GPA of 2.65 and be enrolled in at least one required biology, chemistry, physics, or biochemistry course OR one required NEP course per semester to be eligible. Degree Program Requirements include General Education courses, HES College requirements, and Professional Program courses. Electives or supportive courses complete the 120 hours required for the degree.

All NEP courses require a grade of C or higher

Science Foundation (29 - 31 hours)
- BIO SC 1500 Introduction to Biological Systems (5)
- CHEM 1320 College Chem I (4)
- CHEM 1330 College Chemistry II (4)
- CHEM 2100 Organic Chemistry I (3)
- CHEM 2110 Organic Chemistry II (3) and
- CHEM 2130 Organic Lab (2)
- PHYSCS 1210 College Physics I (4) and
- PHYSCS 1220 College Physics II (4) or
- PHYSCS 2750 and
- PHYSCS 2760 University Physics I & II (10)

Core Curriculum (39 hours)
- BIO SC 2200 General Genetics (4)
- BIO SC 2300 Introduction to Cell Biology (4)
- BIOCH 4270 Biochemistry (3)
- BIOCH 4272 Biochemistry (3)
- MPP 3202 Elements of Physiology (5) or
  BIO SC 3700 Animal Physiology (5)
- MPP 4204 Medical Pharmacology (5)
- NEP 2340 Human Nutrition I (3) (sp)
- NEP 2450 Nutrition Throughout the Life Span (3) (sp)
- NEP 4400 Pathophysiology of Disease (3) (sp)
- NEP 4950 Capstone: Research in Nutr. Sciences (2) (f)
- NEP 4951W Nutrition Research Communication (1)

Choose from two options for the remaining core curriculum:
Option 1:
- NEP 4340 Human Nutrition II Lecture (3) (f)
- NEP 4360 Nutrition Assessment (3) (f)
Option 2:
- NEP 1340 Introduction to Exercise and Fitness (3)
- NEP 3450 Activity Throughout the Lifespan (3)
- NEP 3850W Physiology of Exercise (3)

Math & Statistics Requirements (6-8 hours)
- MATH 1400 Calculus for Social and Life Sciences (3) or
  MATH 1500 Analytic Geometry and Calculus I (5)
- ESC PS 4170 Introduction to Applied Statistics (3)

Communications Requirement
- COMMUN 1200 Public Speaking (3)

Professional Electives (a minimum of 10 hours)
- BIOCHM 4974 Biochemistry Lab(5)
- BIO SC 4976 Molecular Biology (3)
- CHEM 3200 Quantitative Methods of Analysis with Lab (4)
- FS 4310 Food Chemistry and Analysis (3)
- FS 4370 Food Microbiology (3)
- MATH 1700 Calculus II (5) or
  MATH 2100 Calculus for Social and Life Sciences II (3)
- MICROB 3200 Intro. to Medical Microb & Immun. (4)
- MPP 4202 Medical Physiology (4)
- NEP 2460 Eating Disorders (3) (f)
- NEP 3131 International Nutr & Ex Phys (study abroad)(3)(su)
- NEP 4330 Human Nutrition II Lab (2) (f)
- NEP 4370 Nutrition Therapy I (3) (sp)
- NEP 4550 Exercise is Medicine (2)
- NEP 4590 Community Nutrition (3) (f)
- PTH AS 2201 Elementary Anatomy Lecture (3)

Minimum of 120 credit hours are required.
Human Physiology and Translational Sciences (Pre-med program)
Sample Course Guide

### Fall I
- Am. History or Government 3
- CHEM 1320 College Chem I 4
- ENGLISH 1000 Expos & Argumentation 3
- GN HES 1100 Intro to Human Env Sc 1
- MATH 1400 Calc for Social & Life Sci I or MATH 1500 Analytic Geom & Calc I 3-5
- **Total** 14-16

### Spring I
- BIO SC 1500 Intro Bio Systems with lab 5
- CHEM 1330 College Chem II 4
- COMMUN 1200 Public Speaking 3
- Social/Behavioral Science (Psych 1000 recommended) 3
- **Total** 15

### Fall II
- BIO SC 2200 General Genetics 4
- CHEM 2100 Organic Chemistry I 3
- Elective or NEP 1340 Intro to Fitness (f) 3
- Humanities (recommend Phil 2440 Medical Ethics) 3
- HES Foundation Course (WI) recommended 3
- **Total** 15

### Spring II
- Bio Sc 2300 Intro to Cell Biology 4
- CHEM 2110 Organic Chem II 3
- CHEM 2130 Organic Chem I Lab 2
- NEP 2340 Human Nutrition I (sp) 3
- Social/Behavioral Science (Sociol 3440 recommended) 3
- **Total** 15

### Fall III
- BIOCHM 4270 Biochemistry 3
- MPP 3202 Human Phys. or Bio 3700 Animal Phys. 5
- NEP 4360 Nutritional Assessment (f) or NEP 3450 Activity throughout the Lifespan 3
- PHYSCS 1210 Physics I or PHYSCS 2750 4-5
- **Total** 15-16

### Spring III
- BIOCHM 4272 Biochemistry 3
- Esc Ps 4170 Intro to Applied Stat 3
- Professional Elective 3
- NEP 2450 Nutrition Throughout the Life Span 3
- PHYSCS 1220 Physics II or PHYSCS 2760 4-5
- **Total** 16-17

### Fall IV
- Elective 2
- MPP 4204 Medical Pharmacology 4
- NEP 4340 Human Nutrition II or NEP 3850W Physiology of Exercise (f) 3
- NEP 4950 Capstone: Research in Nutritional Science (f) 2
- Professional Elective 4
- **Total** 15

### Spring IV
- NEP 4400 Pathophysiology 3
- HES Foundation Course 3
- Humanities 3
- NEP 4951 Nutrition Research Communication (WI) (sp) 1
- Professional Electives 4
- **Total** 14

Gen Ed [https://generaleducation.missouri.edu/requirements/](https://generaleducation.missouri.edu/requirements/)

HES Foundation Options [http://catalog.missouri.edu/undergraduategraduate/collegeofhumanenvironmentalsciences/#undergraduatetext](http://catalog.missouri.edu/undergraduategraduate/collegeofhumanenvironmentalsciences/#undergraduatetext)

Effective Fall 2020