

BACHELOR OF SCIENCE IN HEALTH SCIENCES (BSHS) – PHYSIOLOGY AND MEDICAL SCIENCES

For students entering in the spring 2022 semester and beyond

Schedule an advising appointment online: <https://ua-trellis.my.site.com/uastudent/s/>

4-year plans can be found at: <https://physiology.arizona.edu/education/undergraduate/physiology-major/links>

UNIVERSITY REQUIREMENTS

University Composition Requirement (3-6 units)

| | |
|---|---------|
| ENGL 101 First-Year Composition | 3 _____ |
| ENGL 102 First-Year Composition* | 3 _____ |
| OR ENGL 109H First-Year Composition Honors* | 3 _____ |

*Grade of B or better is required

Mathematics Requirements – 2 courses required (6-8 units)

1) Calculus I or Mathematics of the Biological Systems

| | |
|-------------------------|-----------|
| MATH 122a and MATH 122b | 1/4 _____ |
| OR MATH 125 | 3 _____ |
| OR MATH 119a | 4 _____ |

2) Calculus II or Biostatistics

| | |
|-------------------------------------|---------|
| MATH 129 | 3 _____ |
| OR MATH 263 or BIOS 376 or ECOL 379 | 3 _____ |

Second Language (0-8 units)

Complete one of the following:

- A) Complete courses through 2nd semester level
- B) Pass a language proficiency exam at 2nd semester level

General Education

Exploring Perspectives (12 units)

Artist _____ 3 _____

Humanist _____ 3 _____

Social Scientist _____ 3 _____

Natural Scientist _____ 3 _____

Building Connections (9 units)

_____ 3 _____
 _____ 3 _____
 _____ 3 _____

UNIV 101 – Intro to Gen Ed Experience 1 _____

UNIV 301 – Gen Ed Portfolio 1 _____

Mid-Career Writing Assessment

Satisfied by a grade of A or B in ENGL 102 or 109H _____

SCIENCE REQUIREMENTS (35 units)

| | |
|---|---------|
| CHEM 151 General Chemistry I | 4 _____ |
| CHEM 152 General Chemistry II | 4 _____ |
| CHEM 241a Organic Chemistry I Lecture | 3 _____ |
| CHEM 243a Organic Chemistry I Lab | 1 _____ |
| CHEM 241b Organic Chemistry II Lecture | 3 _____ |
| CHEM 243b Organic Chemistry II Lab | 1 _____ |
| MCB 181R Introductory Biology I Lecture | 3 _____ |
| MCB 181L Introductory Biology I Lab | 1 _____ |
| ECOL 182R Introductory Biology II Lecture | 3 _____ |
| ECOL 182L Introductory Biology II Lab | 1 _____ |
| PHYS 110 Introductory Studio Physics I | 4 _____ |
| PHYS 111 Introductory Studio Physics II | 4 _____ |
| BIOC 384 Foundations in Biochemistry | 3 _____ |
| OR BIOC 385 Metabolic Biochemistry | |
| OR ACBS 445 Nutritional PSIO + Metabolic BIOC | |

PHYSIOLOGY AND MEDICAL SCIENCES MAJOR (36 units total)

Required Courses (14 Units)

| | |
|--|---------|
| PSIO 201 Human Anatomy & Physio I (F, SP, SSI) | 4 _____ |
| PSIO 202 Human Anatomy & Physio II (F, SP, SSII) | 4 _____ |
| PSIO 303 Integrative Cellular Physio (F only) | 3 _____ |
| PSIO 305 Integrative System Physio (SP only) | 3 _____ |

*Students must complete PSIO 201 (with a C or better), and PSIO 202 (with a C or better) before being eligible to enroll in any 300 and 400-level PSIO courses

Exercise and Extreme Physiology (22 Units)

Emphasis Requirements

I. Required Core Course (Choose one course) (3 Units)

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|---|---------|
| PSIO 420 Exercise Physiology (F) | 3 _____ |
| PSIO 441 Musculoskeletal Kinesiology (F/SP) | 3 _____ |

II. Complete nine units from the following: (9 Units)

| | |
|---|---------|
| PSIO 425 Meas & Eval of Physiological Function (SP) | 3 _____ |
| PSIO 426 Extreme Physiology (F) | 3 _____ |
| PSIO 429 Muscle Physiology (F/SP) | 3 _____ |
| PSIO 441 Musculoskeletal Kinesiology (F/SP) | 3 _____ |
| PSIO 442 Biomechanics of Human Movement (SP) | 3 _____ |
| PSIO 465 Neurophysiology (SP) | 3 _____ |
| PSIO 485 Cardiovascular Physiology (F) | 3 _____ |
| PSIO 487 Physiology of Aging (F) | 3 _____ |
| PSIO 495M Musculoskeletal Physiology (SP) | 2 _____ |
| PHCL 430 Pain Pharmacology (F) | 3 _____ |

*Course offerings subject to change

III. Complete 10 additional major elective units (10 units)

Choose any upper-division electives from major elective list (see back for checklist of elective options). 6 of the 10 units must be lecture-style courses; the remaining 4 units can come from independent study, research, mentorship or preceptorship units or additional lecture courses.

| | |
|-----------------------|-----------|
| Elective course _____ | 1-4 _____ |

Total Units for degree: 120 units

Required: Minimum of 42 units of upper-division credit (all courses numbered 300-499). The major coursework could provide 23 of these units; however, the remaining 19 units are up to the student through additional PSIO Major Electives, Research or Internship units, an optional minor, or general elective courses.

Note: Required courses may not be taken for Pass/Fail; however, exceptions are: PSIO 391, 399, and 499.

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| Lecture Courses | | Other Courses (Research, Internships, Independent Study, Thesis, Preceptorship) | |
|-----------------|---|---|--|
| PSIO 101 | Tackling Physiological Topics (First-year Spring Semester) | PSIO 391 | Preceptorship |
| PSIO 195 | Freshman/Sophomore Colloquium | PSIO 391H | Honors Student Preceptorship |
| PSIO 295H | Introduction to Honors in Physiology | PSIO 393 | Internship |
| PSIO 295R | Introduction to the Scientific Methods and Research | PSIO 393 | PSIO Peer Mentorship |
| PSIO 395A | PhysioConnects A | PSIO 399 | Independent Study |
| PSIO 395B | PhysioConnects B | PSIO 399H | Honors Independent Study |
| PSIO 404 | Advanced Topics in Cellular Physiology | PSIO 492 | Directed Research |
| PSIO 411 | Scientific Methods and Professional Ethics | PSIO 496R | Current Research in Physiology and Biomedical Sciences |
| PSIO 420 | Exercise and Environmental Physiology | PSIO 498H | Honors Thesis |
| PSIO 425 | Measurement and Evaluation of Physiological Function | PSIO 499 | Independent Study |
| PSIO 426 | Extreme Physiology | PSIO 499H | Honors Independent Study |
| PSIO 427 | Metabolism & Disease | | |
| PSIO 429 | Muscle Physiology | | |
| PSIO 431 | Physiology of the Immune System | | |
| PSIO 441 | Musculoskeletal Kinesiology | | |
| PSIO 442 | Biomechanics of Human Movement | | |
| PSIO 450 | Respiratory Physiology | | |
| PSIO 452 | Digestive Physiology | | |
| PSIO 465 | Neurophysiology | | |
| PSIO 467 | Endocrine Physiology | | |
| PSIO 469 | Human Reproductive Physiology | | |
| PSIO 472 | Quantitative Modeling of Biological Systems | | |
| PSIO 484 | Cardiovascular Muscle Biology and Disease | | |
| PSIO 485 | Cardiovascular Physiology | | |
| PSIO 487 | Physiology of Aging | | |
| PSIO 489 | Current Topics in Physiology | | |
| PSIO 495H | Senior Honors Thesis Preparation | | |
| PSIO 495K | Inflammation and Disease | | |
| PSIO 495M | Musculoskeletal Physiology | | |
| PSIO 495S | Sex Matters in Medicine | | |
| PSIO 495T | Topics in Physiology | | |
| CMM 401 | Human Gross Anatomy | | |
| CMM 410 | Human Histology: An Introduction to Pathology | | |
| CMM 415 | Mechanisms of Human Disease | | |
| CMM 465 | Fundamentals of Light Microscopy and Electronic Imaging | | |
| ECOL 320 | Genetics | | |
| FCM 201 | Being a Health Care Professional: An Overview | | |
| IMB 401 | Medical Microbiology and Immunology | | |
| MCB 304 | Molecular Genetics | | |
| MCB 325 | Biology of Cancer | | |
| NSC 308 | Nutrition and Metabolism | | |
| NSC 445 | Assessment and Regulation of Human Body Composition | | |
| NURS 493 | K-8 Health Connectors Internship | | |
| PATH 415 | Mechanisms in Human Disease | | |
| PATH 416 | The Nature of Disease: Diseases of Organ Systems | | |
| PCOL 320 | What's Your Poison? Toxicology of Substances that Surround Us | | |
| PCOL 434 | Pharmacology of Sex | | |
| PHCL 412 | Introduction to Pharmacology | | |
| PHCL 422 | Introduction to Toxicology | | |
| PHCL 430 | Pain Pharmacology | | |
| PHCL 442 | Human Performance Pharmacology | | |