THE UNIVERSITY OF ARIZONA
COLLEGE OF MEDICINE TUCSON
Physiology

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.force.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 II
_____ 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 102 Introductory Physics I Lecture 3 _____
PHYS 181 Introductory Physics I Lab 1 _____
PHYS 103 Introductory Physics II Lecture 3 _____
PHYS 182 Introductory Physics II Lab 1 _____
BIOC 384 Foundations in Biochemistry
OR BIOC 385 Metabolic Biochemistry 3 _____
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**

Physiological Research and Innovation **(22 Units)**

Emphasis Requirements

I. Core Courses **(6-9 Units)**

PSIO 295R (2) or PSIO 411 (F) **AND** 2-3_____
PSIO 195 (1) or PSIO 496R (F/SP) 1-3 _____
Individual Studies course 3_____

II. PRI Emphasis Electives **(3-6 units)**

PSIO 399/PSIO 399H Independent Study (F, SP, SS) 3_____
PSIO 499/PSIO 499H Independent Study (F, SP, SS) 3_____
PSIO 492 Directed Research (F, SP, SS) 3_____
PSIO 498H Honors Thesis (F, SP) 3_____
*PSIO 411 Scientific Methods and Professional Ethics (F) 3_____
*PSIO 496R Current Research in Physiology and Biomedical Sciences (F, SP) 3_____
BME 481A Innovation, Translation and Entrepreneurship (SP) 3_____
PSIO 487 Physiology of Aging (F) 3_____
PSIO 472 Quantitative Modeling of Biological Systems (F) 3_____
PSIO 452 Digestive Physiology (F) 3_____
PSIO 484 Cardiovascular Muscle Biology and Disease (SP) 3_____
PSIO 485 Cardiovascular Physiology 3_____
PSIO 429 Muscle Physiology (SP) 3_____
PSIO 450 Respiratory Physiology (SP) 3_____
PSIO 465 Neurophysiology (SP) 3_____
PSIO 467 Endocrine Physiology 3_____
PSIO 469 Reproductive Physiology 3_____
PSIO 431 Physiology of the Immune System (F, SP) 3_____
Course may be used in PRI Emphasis if **not used in Required Core*

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 ____
Elective course _____ 1-4 ____
Elective course _____ 1-4 ____
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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Major Electives List

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	PSIO Peer Mentorship
PSIO 295R	Introduction to the Scientific Methods and Research	PSIO 399	Independent Study
PSIO 395A	PhysioConnects A	PSIO 399H	Honors Independent Study
PSIO 395B	PhysioConnects B	PSIO 492	Directed Research
PSIO 404	Advanced Topics in Cellular Physiology	PSIO 496R	Current Research in Physiology and Biomedical Sciences
PSIO 411	Scientific Methods and Professional Ethics		
PSIO 420	Exercise and Environmental Physiology		
PSIO 425	Measurement and Evaluation of Physiological Function	PSIO 498H	Honors Thesis
PSIO 426	Extreme Physiology	PSIO 499	Independent Study
PSIO 427	Metabolism & Disease	PSIO 499H	Honors Independent Study
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 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		