CURRICULUM PLAN COLLEGE OF HEALTH PROFESSIONS 2023-2024

MY ADVISOR'S NAME IS: _____

BIOMECHANICS

REQUIREMENTS

CORE CURRICULUM

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at marshall.edu/gened.

CORE 1: CRITICAL THINKING

CODE	COURSE NAME	HRS	GRADE
FYS 100	First Year Seminar	3	
HS 200	Critical Thinking Course	3	
PSY 201	Critical Thinking Course	3	

Additional University Requirements

_____	Writing Intensive (WI sec of Core II Hum)	3	
_____	Writing Intensive	3	
_____	Multicultural or International (MUS 142 rec.)	3	
HS 475	Capstone I	3	
HS 495	Capstone II	3	

CORE 2:

CODE	COURSE NAME	HRS	GRADE
ENG 101	Beginning Composition	3	
ENG 201	Advanced Composition	3	
CMM 103	Fund Speech-Communication	3	
MTH 132	Precalculus w/ Sci Applic	5	
BSC 228	Physical/Natural Science	4	
_____	Core II Humanities (WI)	3	
PSY 201	Introductory Psychology (CT)	3	
_____	Core II Fine Arts (MUS 142 rec.)	3	

MAJOR-SPECIFIC

All Biomechanics majors are required to take the following courses in the professional core:

CODE	COURSE NAME	HRS	GRADE
BSC 227	Human Anatomy	4	
BSC 228	Human Physiology	4	
DTS 210	Nutrition	3	
ESS 220	Fitness and Wellness	3	
ESS 345	Exercise Physiology	3	
ESS 375	Fitness Assess & Exer Prescr	3	
STHM 401	Ethics in Sports	3	
STHM 410	Princ, Org, & Admin Phys Ed	3	
ESS 442	Princ of Strength & Condition	3	
ESS 443	Princ of Strength & Cond Lab	1	
HS 200	Comp Medical Terminology (CT)	3	
HS 215	Intro to Athletic Training	3	
HS 220	Personal Health	3	
HS 222	Hlth Prov First Aid/CPS/AED	3	
HS 365	Functional Kinesiology	3	
HS 369	Motor Learning	3	
HS 435	Biomech Instrument Mat Lab	3	

CODE	COURSE NAME	HRS	GRADE
HS 464	Pathomechanics	3	
HS 465	Biomechanical Analysis of Mvmnt	3	
HS 475	Trends in Biomech Analysis (C)	3	
HS 495	Trends in Biomechanical Analysis II (C)	3	
STA 225	Introductory Statistics	3	
SFT 235	Intro to Occup Safety (CT)	3	
SFT 373	Prin Ergonomics & Human Factors	3	
SFT 373L	Prin Ergonomics Lab	1	
PHY 201	College Physics I	3	
PHY 202	General Physics I Lab	1	
PHY 203	College Physics II	3	
PHY 204	General Physics II Lab	1	
PSY 311	Child Development	3	
PSY 312	Adult Development	3	
_____	Free Elective (or Area of Emphasis)	3	
_____	Free Elective (or Area of Emphasis)	3	
_____	Free Elective	3	

MAJOR INFORMATION

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- Course offerings and course attributes are subject to change semesters. Please consult each semester'ws schedule of courses for availability and attributes.
- **Math Requirement:** The biomechanics math requirement is for MTH 132 only (a pre-requisite for Physics 1). Students need an ACT Math score of 24+ to be eligible for MTH 132. For students with a lower ACT Math score, we allow them to take two courses as an alternative: Algebra (MTH 130 with ACT 21+ or MTH 127 with ACT 17+) and then Trigonometry (MTH 122) over two semesters.
- Areas of Emphasis
  - **Biomechanics Comprehensive**: Students will complete the 87-hour professional core. One term of summer school will be required to complete this degree in four years. There are 7 hours of free electives.
  - **Biomechanics Pre-Physical Therapy**: In addition to the 87-hour professional core, students will complete CHM 211, 217, 212, and 218; and BSC 120, and 121. Summer school will be required to complete this degree in four years. There are no electives available for students.
  - **Biomechanics Physics**: In addition to the 87-hour professional core, students will complete PHY 304, 314, and 405, in addition to one of the following (PHY 350 or PHY 360). There are no electives available for students.
  - **Biomechanics Pre-Medical**: In addition to the 87-hour professional core, students will complete CHM 211, 217, 212, 218, 355, 356, and 361; and BSC 120, 121 in addition to core courses. Summer School will be required to complete this degree in four years. There are no electives available for students.
  - **Biomechanics Safety**: In addition to the 87-hour professional core, students will complete SFT 372, 375, 378, 458, and 460.

● General Education Requirement ■ College Requirement ◆ Major Requirement ◆ Area of Emphasis

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

FOUR YEAR PLAN | COLLEGE OF HEALTH PROFESSIONS | 2023-2024

MY ADVISOR'S NAME IS: _____

BIOMECHANICS

Biomechanics is the analysis of human movement to enhance performance, improve training, accelerate rehabilitation, and reduce injury risk. This is done by integrating various mechanical aspects of human movement during static and dynamic activities. The Biomechanics degree applies physics and math principles to study the interactions between humans and various machine systems in both working and living environments. Students will be exposed to specialized equipment to help measure the interaction of humans with their environment. Force plates and accelerometers measure forces generated by various segments of the body and then exerted externally to the body. Muscle activation is measured through electromyography. Motion analysis, using video to create three-dimensional reconstructions, measures body positions, velocities, and accelerations.

YEAR ONE

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
FYS 100	First Year Sem Crit Thinking	3	
ENG 101	Beginning Composition	3	
HS 200	Comp Medical Terminology (CT)	3	
_____	College Algebra (MTH 127 or MTH 130) or MTH 132 Precalculus w/ Sci Application	3-5	
UNI 100	Freshman First Class	1	
TOTAL HOURS		**13-15**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
HS 222	Hlth Prov First Aid/CPR/AED	3	
MTH 122 / Elective	Plane Trigonometry/ or Free Elective if MTH 132 is completed in Fall	3	
ENG 201	Advanced Composition	3	
BSC 227	Human Anatomy	4	
PSY 201	Introductory Psychology (CT)	3	
TOTAL HOURS		**16**	

Summer Term (optional):

YEAR TWO

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 228	Human Physiology	4	
HS 365	Functional Kinesiology	3	
PHY 201	College Physics I	3	
PHY 202	General Physics I Lab	1	
PSY 311	Child Development	3	
HS 220	Personal Health	3	
TOTAL HOURS		**17**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
ESS 345	Exercise Physiology	3	
PHY 203	College Physics II	3	
PHY 204	General Physics II Lab	1	
HS 215	Intro to Athletic Training	3	
SFT 235	Intro to Occup Safety (CT)	3	
PSY 312	Adult Development	3	
TOTAL HOURS		**16**	

Summer Term (optional):

YEAR THREE

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
ESS 375	Fitness Assess & Exercise Prescr	3	
STHM 401	Ethics in Sports	3	
HS 465	Biomechanical Analysis of Mvmnt	3	
STA 225	Introductory Statistics (CT)	3	
_____	Core II Fine Arts (MUS 142 rcmd.)	3	
TOTAL HOURS		**15**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
ESS 220	Fitness and Wellness	3	
HS 435	Biomech Instrument Mat Lab	3	
HS 464	Pathomechanics	3	
SFT 373	Prin Ergonomics & Human Factors	3	
SFT 373L	Prin Ergonomics Lab	1	
_____	Core II Humanities (WI)	3	
TOTAL HOURS		**16**	

Summer Term (required):

HS 369	Motor Learning	**3**	

YEAR FOUR

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
DTS 210	Nutrition	3	
ESS 442	Princ of Strength & Conditioning	3	
ESS 443	Princ of Strength & Condition Lab	1	
HS 475	Trends in Biomechanical Analysis (C)	3	
CMM 103	Fund Speech Communication	3	
_____	Free Elective	3	
TOTAL HOURS		**16**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
STHM 410	Princ, Org, & Admin Phys Ed	3	
HS 495	Trends in Biomech Analysis II (C)	3	
_____	Free Elective or Area of Emphasis	3	
_____	Free Elective or Area of Emphasis	3	
TOTAL HOURS		**12**	

Summer Term (optional):

◆ Area of Emphasis
◆ Major Requirement
■ College Requirement
● General Education Requirement

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.