

BIOMECHANICS MINOR

Biomechanics, a subfield of biomedical engineering, blends the life sciences with the traditional engineering disciplines of dynamics, solid mechanics, and fluid mechanics.

About this Program

- **College:** Herbert Wertheim College of Engineering (<http://catalog.ufl.edu/UGRD/colleges-schools/UGENG/>)
- **Credits:** 15-17

Department Information

The Department of Mechanical & Aerospace Engineering (MAE) graduates many exceptional mechanical and aerospace engineers each year. The Mechanical Engineering program celebrated its 100 year anniversary in 2009 and is one of the founding departments of the Herbert Wertheim College of Engineering. Starting within mechanical as an aeronautical option, the Aeronautical Engineering program was founded in 1946. It grew to become the Aerospace Engineering program, which merged with Engineering Science and Mechanics in 1969. All these programs united (or reunited) in 2002. Going strong into the 21st century, MAE remains a vibrant and intellectually diverse program at both the undergraduate and graduate levels.

Website (<https://mae.ufl.edu/>)

CONTACT

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Email (advising@mae.ufl.edu) | Map (<https://campusmap.ufl.edu/#/index/0725>)

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Gainesville, FL 32611-6250

1064 Center Drive

Building NEB, Room 181

Gainesville, FL 32611

Map (<https://campusmap.ufl.edu/#/index/0033>)

Curriculum

- Aerospace Engineering
- Biomechanics Minor
- Combination Degrees
- Mechanical Engineering
- Sustainable and Resilient Energy Engineering Certificate

Students in mechanical engineering can apply biomechanics minor coursework toward their science and technical electives.

Required Courses

Code	Title	Credits
Select three:		9
BME 3219	Engineering Analysis of Musculoskeletal Biomechanics	
BME 3234	Mechanical Behavior of Biological Tissues and Systems	
EGM 4585	Modeling and Control of Biomolecular Machines	
EGM 4590	Biodynamics	
EGM 4592	Bio-Solid Mechanics	
EGM 4853	Bio-Fluid Mechanics and Bio-Heat Transfer	
EML 4292	Microfluidics and BioMEMS	
Approved electives		6-8
Total Credits		15-17

Approved Electives

Code	Title	Credits
ABE 3612C	Heat and Mass Transfer in Biological Systems	4
ABE 3652C	Physical and Rheological Properties of Biological Materials	3
ABE 4662	Quantification of Biological Processes	3
APK 2100C	Applied Human Anatomy with Laboratory	4
APK 2105C	Applied Human Physiology with Laboratory	4
APK 3220C	Biomechanical Basis of Movement	3

BME 4220	Biomolecular Cell Mechanics	3
BME 4409	Quantitative Physiology	3
BME 4632	Biomedical Transport Phenomena	3
BSC 2011	Integrated Principles of Biology 2	3
EIN 4242C	Workplace Ergonomics and Biomechanics	3
PHZ 4710	Introduction to Biological Physics	3
Any course remaining from list of required courses		3
Any second course remaining from list of required courses		3
