

# UTSA<sup>®</sup>Engineering

# Biomedical Engineering

AET 1.102

<http://engineering.utsa.edu/bme/>

210-458-7084



## Concentration Areas

- Biomechanics
- Biomaterials, Cellular, and Tissue Engineering
- Biomedical Imaging and Nano-biotechnology

## Educational Objectives

The Biomedical Engineering Program at UTSA trains and graduates students to:

- Contribute positively in the biomedical engineering industry and/or other sectors such as hospitals, government agencies and academia.
- Enhance competence in biomedical engineering by pursuing an advanced and/or professional degree in the practice of bioengineering.
- Work successfully as a member in a team environment to facilitate biomedical engineering practices.

## Biomedical Engineering Provides


- An interdisciplinary field, combining engineering principles, approaches, and methodologies with biological, chemical and physical sciences in order to define and solve problems in medicine. Students who major in Biomedical Engineering at UTSA will be trained in the fundamentals of science and engineering and will be prepared to apply this knowledge in investigating fundamental bioengineering questions associated with complex living systems as well as with the diagnosis and treatment of human diseases.
- A broad understanding of sciences and engineering principles is provided in the first two years of the program; courses in Physiology, Cell Biology, Engineering Physics, Chemistry, and Engineering Analysis I provide the fundamental training in Biomedical Engineering. During the last two years of the program, students have the option to choose two concentrations as in-depth focus areas of study.



# BME

The University of Texas at San Antonio  
Department of Biomedical Engineering

One UTSA Circle, AET 1.102  
[engineering.utsa.edu/bme/](http://engineering.utsa.edu/bme/)

 [UTSA Biomedical Engineering](#)  
210.458.7084

## UNDERGRAD ADVISOR OF RECORD (UGAR)

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## DEPARTMENT CHAIR

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## SPECIAL PROGRAM INFORMATION

The Department of Biomedical Engineering has clinical and industry internship opportunities available for undergraduates in the summer. The program also provides undergraduates research experience in bioimaging, biomaterials, and biomechanics.

## BIOMEDICAL ENGINEERING STUDENT ORGANIZATIONS

BioMedical Engineering Society (BMES)  
 [BMES of UTSA](#)

Engineering in Medicine and Biology Society (EMBS)  [EMBSatUTSA](#)

Want to get involved outside of the classroom? Visit

<http://engineering.utsa.edu/ssc>  
to learn how!

# UTSA Engineering

## BIOMEDICAL ENGINEERING

UTSA 2018-2020 UNDERGRADUATE CATALOG  
RECOMMENDED PROGRAM OF STUDY

Year 1			Year 1			Year 2			Year 2			Year 3			Year 3			Year 4			Year 4											
Fall (Semester I)			Spring (Semester I)			Fall (Semester III)			Spring (Semester IV)			Fall (Semester V)			Spring (Semester VI)			Fall (Semester VII)			Spring (Semester VIII)											
AIS 1203	Academic Inquiry and Scholarship	3	BME 1002	Introduction to BME	2	BME 2103	Physiology for BME	3	BME 2203	Biomechanics I	3	BME 3013	Clinical Internship in BME	3	BME 3303	Bioinstrumentation	3	BME 3023	BME Tech & Product Develop	3	BME 3033	Indus Intern in BME (BME Elec)	3	BME 4903	BME Senior Design I	3	BME 4913	BME Senior Design II	3			
BIO 1404	Biosciences I	4	CHE 1113	General Chemistry II	3	EGR 2323	Applied Engineering Analysis I	3	BME 3003	Biomaterials I	3	BME 3311	Biomedical Engineering Lab II	1	BME 3703	Biotransport Phenomena	3	BME Elec	Approved BME Elective	3	BME 3711	Biomedical Engineering Lab III	1	BME Elec	Approved BME Elective	3	BME Elec	Approved BME Elective	3	BME Elec	Approved BME Elective	3
CHE 1103	General Chemistry I	3	MAT 1224	Calculus II	4	STA 1403 or 2303	Probability & Stat for Biosciences	3	BME 3114	Cell Biology for BME	4	POL 1013	Intro to American Politics	3	BME Elec	Approved BME Elective	3	BME Elec	Approved BME Elective	3	Core	American History	3	Core	American History	3	Core	American History	3	Core	American History	3
MAT 1214	Calculus I	4	PHY 1943	Physics for Scientists & Eng I	3	PHY 1963	Physics for Scientists & Eng II	3	BME 3211	Biomedical Engineering Lab I	1	Tech Elec	Technical Elective	3	POL 1013	Intro to American Politics	3	Core	Government-Political Science	3	Core	American History	3	Core	American History	3	Core	American History	3	Core	American History	3
WRC 1013	Freshman Comp I	3	PHY 1951	Physics for Scientists & Eng I Lab	1	PHY 1971	Physics for Scientists & Eng II Lab	1	Tech Elec	Technical Elective	3	Tech Elec	Technical Elective	3	Tech Elec	Technical Elective	3	Core	Government-Political Science	3	Core	Creative Arts	3	Core	Creative Arts	3	Core	Creative Arts	3	Core	Creative Arts	3
			WRC 1023	Freshman Comp II	3																											
<b>Total Semester Credit Hours</b>			<b>17</b>	<b>Total Semester Credit Hours</b>			<b>16</b>	<b>Total Semester Credit Hours</b>			<b>14</b>	<b>Total Semester Credit Hours</b>			<b>3</b>	<b>Total Semester Credit Hours</b>			<b>13</b>	<b>Total Semester Credit Hours</b>			<b>13</b>	<b>Total Semester Credit Hours</b>			<b>15</b>	<b>Total Semester Credit Hours</b>			<b>15</b>	
																		<b>TOTAL BME DEGREE HOURS</b>			<b>125</b>											

\*Tech Elec: Beginning 17-18, students **MUST** selected a minimum of 2 courses from one of the following tracks.

Track 1	Track 2	Track 3
EE 2213	EGR 2103	EGR 2213
EGR 3323	ME 3293	EGR 3323
EGR 4993	ME 3813	EGR 3713
	EGR 4993	EGR 4993