

# B.S. in Engineering Technology, Biomedical Engineering Technology

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(120 credits minimum)

**First Year**

<b>1st Semester</b>		<b>Credits</b>
MATH 138	General Calculus I	3
PHYS 102	General Physics I	3
PHYS 102A	General Physics I Lab	1
CHEM 121	Fundamentals of Chemical Principles I	3
CHEM 125A	General Chemistry Lab I	1
MET 103	Engineering Graphics and Intro. to CAD	2
ENGL 101	English Composition: Introduction to Academic Writing	3
ET 101	Introduction to Engineering Technology	0
FYS SEM	First-Year Student Seminar	0
<b>Term Credits</b>		<b>16</b>

**2nd Semester**

MATH 238	General Calculus II	3
PHYS 103	General Physics II	3
PHYS 103A	General Physics II Lab	1
CHEM 122	Fundamentals of Chemical Principles II	3
CHEM 126A	Gen Chemistry Lab II	1
MET 105	Applied Computer Aided Design	2
ENGL 102	English Composition: Introduction to Writing for Research	3
<b>Term Credits</b>		<b>16</b>

**Second Year****1st Semester**

ECET 201	Circuits I	3
BME 111	Introduction to Physiology	3
ENGR 211	Professional Skills for Engineers I	1
Humanities and History GER 200 Level ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/</a> )		3
Technical Elective 1		3
Free Elective 1		3
<b>Term Credits</b>		<b>16</b>

**2nd Semester**

ECON 201 or EPS 202	Economics or Society, Technology, and the Environment	3
BME 210	Processing Fund for Biol Signa	3
MNET 215	Materials and Processes for Technology	3
Technical Elective 2		3
Free Elective 2		3
<b>Term Credits</b>		<b>15</b>

**Third Year****1st Semester**

COM 313	Technical Writing	3
ECET 329	Analog and Digital Electronics	3
MET 303	Applied Thermodynamics	3
Technical Elective 3		3

Free Elective 3		3
<b>Term Credits</b>		<b>15</b>
<b>2nd Semester</b>		
BMET 320	Applied Biomedical Data Acquisition	3
MET 304	Applied Fluid Mechanics	3
MNET 315	Industrial Statistics	3
Technical Elective 4		3
History and Humanities GER 300+ Level ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/</a> )		3
<b>Term Credits</b>		<b>15</b>
<b>Fourth Year</b>		
<b>1st Semester</b>		
MNET 416	Production Scheduling	3
BMET 415	Biomedical Mechatronics	3
BMET 440	Biomedical Experiential Learning	3
MNET 414	Industrial Cost Analysis	3
MET 403	Applied Thermodynamics II	3
<b>Term Credits</b>		<b>15</b>
<b>2nd Semester</b>		
BMET 450	BMET Senior Project	3
MNET 420	Quality Systems	3
Humanities and Social Science Senior Seminar GER ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/</a> )		3
Technical Elective 5		3
<b>Term Credits</b>		<b>12</b>
<b>Total Credits</b>		<b>120</b>

## GER Electives

Refer to the **General Education Requirement** section of this catalog for further information on GER electives.

## Technical Electives

Code	Title	Credits
BME 303	Biological and Chemical Foundations of Biomedical Engineering	3
BME 333	Biomedical Signals and Systems	3
BME 372	Electronics of Medical Devices	3
BME 386	Biosensor and Data Acquisition Lab	3
BME 471	Principles of Medical Imaging	3
BME 489	Medical Instrumentation	3
ECET 210	Intro. to Microprocessors and Computer Architecture	3
ECET 303	Circuit Measurements	2
IE 473	Safety Engineering	3
MATH 309	Mathematical Analysis for Technology	4
MET 205	Advanced Computer Aided Design	3
MET 235	Statics for Technology	3
MET 237	Strength of Materials for Technology	3
MIT 326	Electronic Medical Record Design	3
MIT 360	Introduction to Gerontology	3
MIT 362	Geriatric Engineering I	3
MIT 460	Economics of Aging: Microeconomics(individual) and Macroeconomic(global) Challenges	3
MNET 300	Concepts In Machining	3
SDET 325	Medical Informatics Technology	3
SDET 330	Software Web Applications for Engineering Technology I	3

SDET 341	Visual Basic.NET for Engineering Technology	3
SDET 373	Web App Development for Mobile	3
SDET 425	Medical Informatics Technology II	3
SDET 430	Software Web Applications for Engineering Technology II	3