B.S. in Engineering Technology, Biomedical Engineering Technology

(120 credits minimum)

First Year

1st Semester

		Credits
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	Introduction to Engineering Technology Design	2
ENGL 101	English Composition: Introduction to Academic Writing	3
ET 101	Introduction to Engineering Technology	0
FYS SEM	First-Year Student Seminar	0
	Term Credits	**16**

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
	Term Credits	**16**

Second Year

1st Semester

ECET 201	Circuit Analysis DC and AC	3
BME 111	Introduction to Physiology	3
BME 210 or SDET 101	Processing Fund for Biol Signa or Fundamentals of Software and Data Technologies	3
ENGR 211	Professional Skills for Engineers I	1
Humanities and History GER 200 Level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
Technical Elective 1		3
	Term Credits	**16**

2nd Semester

BMET 231	Medical Networks, Data Security, and Privacy	3
MNET 215	Materials and Processes for Technology	3
Social Science Literacy GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/)		3
Technical Elective 2		3
Free Elective 1		3
	Term Credits	**15**

Third Year

1st Semester

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

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

GER Electives

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

Approved 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 472	FDA Regulation of Medical Devices	3
BME 489	Medical Instrumentation	3
BMET 360	Introduction to Universal Design for Assistive Technologies	3
BMET 362	Integration and Realization of Assistive Technologies	3
CHEM 243	Organic Chemistry I	3
CHEM 244A	Organic Chemistry I Laboratory	2
ECET 210	Intro. to Microprocessors and Computer Architecture	3
ECET 303	Circuit Measurements	2
ENGR 350	Intellectual Property for Engineers	3
ENGR 360	Geometric Dimensioning and Tolerancing and Applied Metrology	3
ENGR 424	Robotics Science Fundamentals	3
ENGR 430	Engineering for Quality and Reliability	3
IE 355	Human Factors	3
IE 473	Safety Engineering	3
MATH 309	Mathematical Analysis for Technology	4

MATH 322	Differential Equations for Applications	3
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 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

MATH 107/108/110 cannot be used to satisfy any free or technical electives.