

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 | 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 |
| 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**

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|--|-------------------------------------|-----------|
| 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 (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/) | | 3 |
| Technical Elective 1 | | 3 |
| Free Elective 1 | | 3 |
| Term Credits | | 16 |

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 |
| Term Credits | | 15 |

Third Year**1st Semester**

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

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|--|-------------------------------------|------------|
| Free Elective 3 | | 3 |
| Term Credits | | 15 |
| 2nd Semester | | |
| 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 (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/) | | 3 |
| Term Credits | | 15 |
| Fourth Year | | |
| 1st Semester | | |
| 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 |
| 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.

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 |

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|----------|---|---|
| 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 |