

B.S. in Engineering Technology, Technology Education

(120 credits)

First Year

| 1st Semester | | Credits |
|---------------------|---|----------------|
| MATH 138 | General Calculus I | 3 |
| PHYS 102 | General Physics I | 3 |
| PHYS 102A | General Physics I Lab | 1 |
| CS 106 | Introduction to Computing | 3 |
| 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 | | 15 |

2nd Semester

| | | |
|---|---|-----------|
| MATH 105 | Elementary Probability and Statistics | 3 |
| PHYS 103 | General Physics II | 3 |
| PHYS 103A | General Physics II Lab | 1 |
| MET 105 | Applied Computer Aided Design | 2 |
| ENGL 102 | English Composition: Introduction to Writing for Research | 3 |
| Social Science Literacy GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/) | | 3 |
| Term Credits | | 15 |

Second Year**1st Semester**

| | | |
|---------------------|---|-----------|
| ECET 201 | Circuit Analysis DC and AC | 3 |
| Technical Elective | | 3 |
| Free Elective | | 3 |
| R300 292 | Social Foundation in Urban Edu ¹ | 3 |
| R300 295 | Child and Adolescent Psychology in the Urban Experience | 3 |
| Term Credits | | 15 |

2nd Semester

| | | |
|---------------------|--|-----------|
| BMET 231 | Medical Networks, Data Security, and Privacy | 3 |
| Technical Elective | | 3 |
| Free Elective | | 3 |
| STS 201 | Understanding Technological Society | 3 |
| R300 298 | Educational Planning for Dually Exceptional Students | 3 |
| Term Credits | | 15 |

Third Year**1st Semester**

| | | |
|---------------------|---|-----------|
| MNET 300 | Concepts In Machining | 3 |
| CET 317 | Construction Computing | 3 |
| Technical Elective | | 3 |
| COM 313 | Technical Writing | 3 |
| R300 454 | Science and Technology Content Planning and Teaching in the Urban Classroom I | 3 |
| Term Credits | | 15 |

2nd Semester

| | | |
|----------|--|---|
| ENGR 320 | Prototyping Essentials | 3 |
| ENGR 330 | Applications of Microcontrollers and IoT devices | 3 |

| | | |
|--|---|------------|
| Technical Elective (3xx or 4xx) | | 3 |
| History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/) | | 3 |
| R300 390 | Culturally Responsive Assessment and Evaluation | 3 |
| R300 455 | Sci&Tech Plan/Tch Urb Class II | 3 |
| Term Credits | | 18 |
| Fourth Year | | |
| 1st Semester | | |
| ET 450 | Multidisciplinary Capstone Project | 3 |
| ENGR 425 | Advanced Manufacturing Rotation | 2 |
| Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/) | | 3 |
| R300 418 | Clinical Practice I Seminar ² | 3 |
| R300 419 | Clinical Practice I | 3 |
| R300 378 | Seminar in Critical Writing | 1 |
| Term Credits | | 15 |
| 2nd Semester | | |
| R300 487 | Clinical Practice II Seminar | 3 |
| R300 488 | Clinical Practice II | 9 |
| Term Credits | | 12 |
| Total Credits | | 120 |

Approved Technical Electives

| Code | Title | Credits |
|----------|---|---------|
| MET 205 | Advanced Computer Aided Design | 3 |
| MET 235 | Statics for Technology | 3 |
| MET 237 | Strength of Materials for Technology | 3 |
| CET 313 | Principles of Heavy Highway Construction | 3 |
| CET 314 | Principles of Building Construction | 3 |
| CMT 452 | Mechanical and Electrical Systems for Construction | 3 |
| ENGR 301 | Engineering Applications of Data Science ³ | 3 |
| ENGR 423 | Drone Science Fundamentals ³ | 3 |
| ENGR 424 | Robotics Science Fundamentals ³ | 3 |
| MNET 303 | Advanced Techniques in CAD/CAM | 3 |
| IET 423 | Workplace Design and Measurement | 3 |
| SDET 325 | Medical Informatics Technology ³ | 3 |
| SDET 330 | Software Web Applications for Engineering Technology I ³ | 3 |
| SDET 341 | Visual Basic.NET for Engineering Technology ³ | 3 |
| SDET 373 | Web App Development for Mobile ³ | 3 |

¹ Apply Rutgers – Newark Urban Teacher Education Program

² Praxis must be taken prior to taking this class.

³ Discuss with advisor for Computer Science Instructional Certificate #1820.