

B.S. in Computer Science and B.S. in Mathematical Sciences, Applied Mathematics

(132 credits)

First Year

| 1st Semester | | Credits |
|---------------------|---|----------------|
| MATH 111 | Calculus I | 4 |
| CS 100 | Roadmap to Computing | 3 |
| PHYS 111 | Physics I | 3 |
| PHYS 111A | Physics I Lab | 1 |
| ENGL 101 | English Composition: Introduction to Academic Writing | 3 |
| FYS SEM | First-Year Student Seminar | 0 |
| Term Credits | | 14 |

2nd Semester

| | | |
|---------------------|---|-----------|
| MATH 112 | Calculus II | 4 |
| CS 113 | Introduction to Computer Science I | 3 |
| PHYS 121 | Physics II | 3 |
| PHYS 121A | Physics II Lab | 1 |
| ENGL 102 | English Composition: Introduction to Writing for Research | 3 |
| Term Credits | | 14 |

Second Year**1st Semester**

| | | |
|--|-------------------------------------|-----------|
| MATH 213 | Calculus III B | 4 |
| MATH 333 | Probability and Statistics | 3 |
| CS 114 | Introduction to Computer Science II | 3 |
| History and Humanities GER 200 (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/) | | 3 |
| Social Sciences GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/) | | 3 |
| Term Credits | | 16 |

2nd Semester

| | | |
|---------------------|-----------------------------------|-----------|
| MATH 222 | Differential Equations | 4 |
| MATH 337 | Linear Algebra | 3 |
| CS 241 | Foundations of Computer Science I | 3 |
| CS 280 | Programming Language Concepts | 3 |
| CS 301 | Introduction to Data Science | 3 |
| Term Credits | | 16 |

Third Year**1st Semester**

| | | |
|---------------------|------------------------------------|-----------|
| MATH 340 | Applied Numerical Methods | 3 |
| MATH 480 | Introductory Mathematical Analysis | 3 |
| CS 288 | Intensive Programming in Linux | 3 |
| CS 332 | Principles of Operating Systems | 3 |
| CS 356 | Introduction to Computer Networks | 3 |
| Term Credits | | 15 |

2nd Semester

| | | |
|----------|---|---|
| MATH 331 | Introduction to Partial Differential Equations | 3 |
| MATH 332 | Introduction to Functions of a Complex Variable | 3 |
| CS 331 | Database System Design & Mgmt | 3 |
| CS 341 | Foundations of Computer Science II | 3 |

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|--|---|------------|
| CS 350 | Intro to Computer Systems | 3 |
| Term Credits | | 15 |
| Fourth Year | | |
| 1st Semester | | |
| MATH 450 | Methods Of Applied Math | 3 |
| MATH 473 | Intermediate Differential Equations | 3 |
| CS 435 | Advanced Data Structures and Algorithm Design | 3 |
| CS 490 | Guided Design in Software Engineering | 3 |
| History and Humanities GER 300 (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/) | | 3 |
| Term Credits | | 15 |
| 2nd Semester | | |
| MATH 451 | Methods Appl Math II | 3 |
| MATH 300+ Elective | | 3 |
| CS 351 | Introduction to Cybersecurity | 3 |
| CS 491 | Senior Project | 3 |
| History and Humanities GER 300 (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/) | | 3 |
| Term Credits | | 15 |
| Fifth Year | | |
| 1st Semester | | |
| MATH 300+ Elective | | 3 |
| MATH 400+ Elective | | 3 |
| IS 350 | Computers, Society and Ethics | 3 |
| Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/) | | 3 |
| Term Credits | | 12 |
| Total Credits | | 132 |