

B.S. in Applied Physics & B.S. in Mathematical Sciences, Applied Mathematics

(122 Credits)

First Year

1st Semester		Credits
MATH 111	Calculus I	4
CS 100 or CS 115	Roadmap to Computing or Introduction to Computer Science I in C++	3
CHEM 125	General Chemistry I	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		17

2nd Semester

MATH 112	Calculus II	4
PHYS 114	Introduction to Data Reduction with Applications	3
PHYS 121 or PHYS 122	Physics II or Electricity & Magnetism ECE Appl	3
PHYS 121A	Physics II Lab	1
CHEM 125A	General Chemistry Lab I	1
CHEM 126	General Chemistry II	3
Term Credits		15

Second Year**1st Semester**

MATH 213	Calculus III B	4
MATH 244	Introduction to Probability Theory	3
PHYS 234	Physics III	3
PHYS 231A	Physics III Lab	1
ENGL 102	English Composition: Introduction to Writing for Research	3
Term Credits		14

2nd Semester

MATH 222	Differential Equations	4
MATH 335	Vector Analysis	3
MATH 337	Linear Algebra	3
PHYS 335	Introductory Thermodynamics	3
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
Term Credits		16

Third Year**1st Semester**

MATH 331	Introduction to Partial Differential Equations	3
MATH 332	Introduction to Functions of a Complex Variable	3
PHYS 430	Classical Mechanics I	3
PHYS 432	Electromagnetism I	3
Term Credits		12

2nd Semester

MATH 340	Applied Numerical Methods	3
PHYS 433	Electromagnetism II	3

Physics/OPSE Elective		3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Term Credits		12
Fourth Year		
1st Semester		
MATH 450	Methods Of Applied Math	3
MATH 473	Intermediate Differential Equations	3
MATH 480	Introductory Mathematical Analysis	3
PHYS 442	Introduction to Quantum Mechanics	3
Term Credits		12
2nd Semester		
MATH 451	Methods Appl Math II	3
PHYS 450	Advanced Physics Lab	3
Phys/OPSE Elective		3
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Term Credits		12
Fifth Year		
1st Semester		
Math 300+ Elective		3
Physics/OPSE Elective		3
Social Sciences GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/)		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		122