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University Catalog 2023-2024

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BS in Computer Science and BS in Mathematical Sciences, Computational Mathematics
Academic Advisors: https://math.njit.edu/students/undergraduate/advisors.php,
https://computing.njit.edu/advising

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Ying Wu College of Computing »
Computer Science »
BS in Computer Science and BS in Mathematical Sciences, Computational 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	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 level		3
Social Sciences 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
CS 350	Intro to Computer Systems	3
	Term Credits	**15**

Fourth Year

1ST SEMESTER

MATH 391	Numerical Linear Algebra	3
MATH 450	Methods Of Applied Math	3
CS 435	Advanced Data Structures and Algorithm Design	3
CS 490	Guided Design in Software Engineering	3
History and Humanities GER 300+ level		3
	Term Credits	**15**

2ND SEMESTER

MATH 451	Methods Appl Math II	3
MATH 453	High-Performance Numerical Computing	3
CS 351	Introduction to Cybersecurity	3
CS 491	Senior Project	3
History and Humanities GER 300+ level		3
Term Credits		**15**

Fifth Year

1ST SEMESTER

MATH 440
   or MATH 448
	Advanced Applied Numerical Methods
	   or Stochastic Simulation
		3

MATH 300+ Elective		3
IS 350	Computers, Society and Ethics	3
Humanities and Social Science Senior Seminar GER		3
Term Credits		**12**
Total Credits		**132**

New Jersey Institute of Technology
University Heights Newark, New Jersey 07102
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