



Department of Mathematics & Computer Science

## Computer Science Major

The Computer Science Major is open to all NCAS and UCN students, and as a second major to other Rutgers Newark undergraduates except majors in Information Systems.

A total of 60 credits is required for the Computer Science Major.

Courses can also be taken at NJIT using school code 28.

### Required Courses:

- 21:198:101 – Computers & Programming I (3 credits)
- 21:198:102 – Computers & Programming II (3 credits)
- 21:198:251 – Computer Organization (3 credits)
- 21:198:280 – Programming Language Concepts (3 credits)
- 21:198:288 – Intensive Programming in Linux (3 credits)
- 21:198:332 – Principles of Operating Systems (3 credits)
- 21:198:335 – Data Structure & Algorithm Design (3 credits)
- 21:198:435 – Advanced Data Structures & Algorithm Design (3 credits)
- 28:198:490 – Guided Design in Software Engineering (3 credits)
- 21&28:198:491 – Computer Science Project (3 credits)

### Additional Computer Science Electives:

9 credits at the 300-400 course level. No more than 3 credits may be taken from 21:198:493, 494, 495, and 496. Computer Science courses are the preferred electives, but Information Systems courses at the 300-400 course level are also allowed.

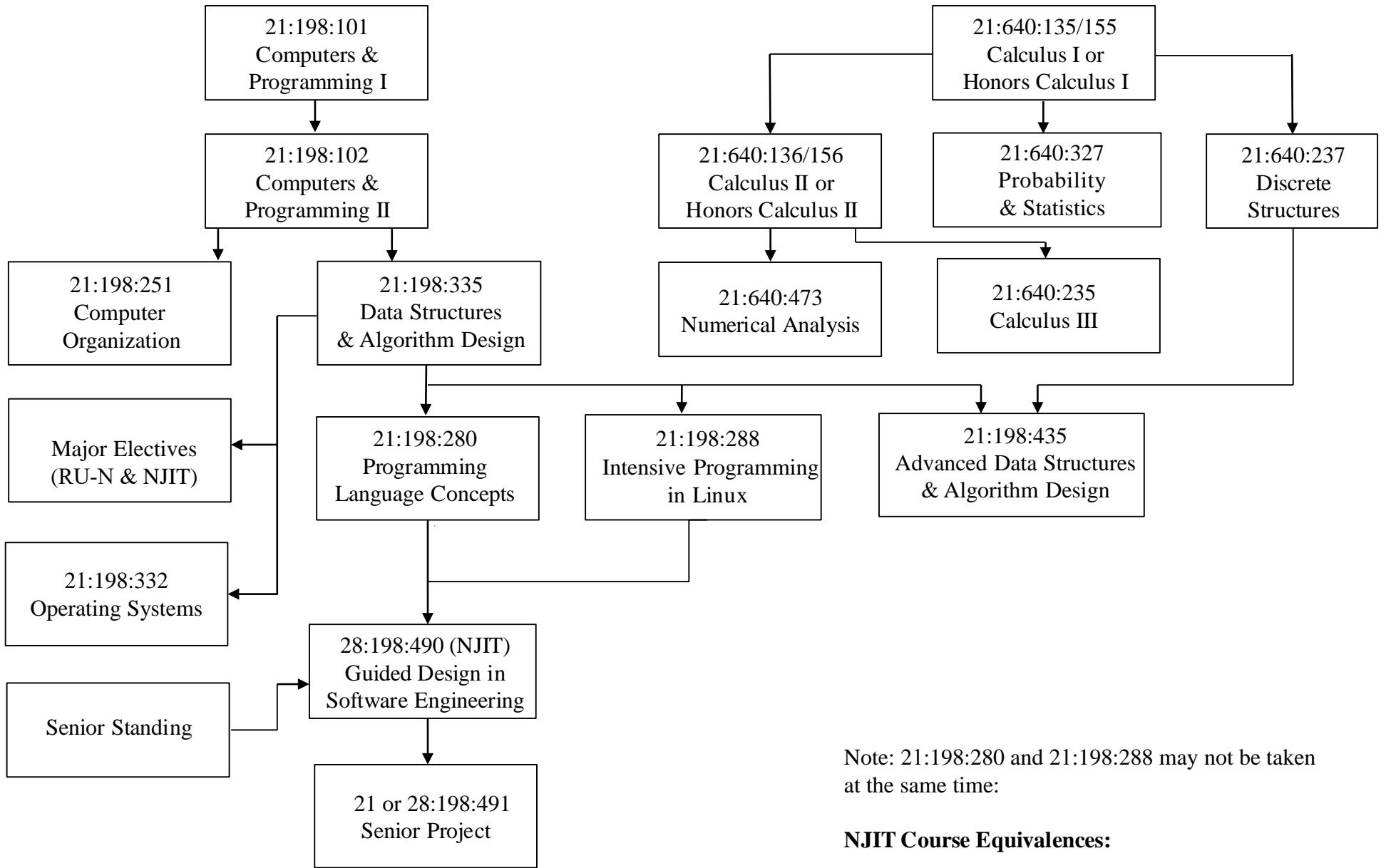
Information Systems 247 is also a valid Computer Science elective.

Information Technology courses do not count as Computer Science electives.

### Other Required Courses:

- 21:640:135 – Calculus I (4 credits)
- 21:640:136 – Calculus II (4 credits)
- 21:640:235 – Calculus III (4 credits)
- 21:640:237 – Discrete Structures (3 credits)
- 21:640:327 OR 28:640:333 – Probability & Statistics (3 credits)
- 21:640:473 – Numerical Analysis (3 credits) OR 28:198:421 – Numerical Algorithms

# Prerequisite Flow Diagram for the Computer Science Major



Note: 21:198:280 and 21:198:288 may not be taken at the same time:

## NJIT Course Equivalences:

21:198:335 == 28:198:114

21:640:237 == 28:198:241