

The Student Outcomes of the BS in CS Program

The department has established student outcomes so that upon graduation, students with a degree in the undergraduate Computer Science program at NYIT will demonstrate an ability to:

- a. Apply knowledge of computing and mathematics appropriate to the discipline.
- b. Analyze a problem and identify and define the computing requirements appropriate to its solution.
- c. Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
- d. Function effectively on teams to accomplish a common goal.
- e. Understand professional, ethical, legal, security, and social issues and responsibilities.
- f. Communicate effectively with a range of audiences.
- g. Analyze the local and global impacts of computing on individuals, organizations, and society.
- h. Engage in and recognize the need for continuing professional development.
- i. Use current techniques, skills, and tools necessary for computing practice.
- j. Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- k. Apply design and development principles in the construction of software systems of varying complexity.

In order to ensure that students achieve student outcomes a-k, the faculty has built the curriculum such that key concepts are introduced, developed, and reinforced throughout a students' time in the program. Table 4.A.1 below shows the relationship between courses in the program and Student Outcomes (a – k).

Relationship between CS Program Courses and Student Outcomes

| ETCS/CSCI | a | b | c | d | e | f | g | h | i | j | k |
|-----------|---|---|---|---|---|---|---|---|---|---|---|
| 105 | | | | | x | | | x | | | |
| 108 | | | | | x | x | x | | | | |
| 125 | | | x | | | x | | | x | | x |
| 155 | x | | x | | | | | | x | x | |
| 185 | | | x | | | x | | | x | | x |
| 235 | x | | | | | | | | x | | |
| 260 | x | | x | | | x | | | | | |
| 270 | x | | | | | | | | | | |
| 312 | x | x | | | | | | | | | |
| 318 | x | | x | | | | | | x | | |
| 300 | x | x | | x | x | x | | | | | |
| 330 | x | x | | | | | | | x | | |
| 335 | x | x | | | | | | | x | | |
| 354* | | | | | x | x | | | | | |
| 355* | x | x | x | | | x | | | x | x | |
| 345 | | | | x | | | | | x | | |
| 380 | | | x | x | | x | | | x | x | x |
| 385* | | x | x | | x | | | | x | | |
| 405* | x | | x | | | | | | x | | |
| 415* | x | x | x | | | | | | x | | |
| 440* | | x | x | | | | | | | | |
| 445* | | | x | | | | | | x | | |

| | | | | | | | | | | | |
|----------|---|---|---|---|---|---|---|---|---|---|---|
| 455 | x | x | x | x | x | x | x | x | x | x | x |
| IENG 400 | | | | | x | x | x | | | | |