



Bachelor of Science in Computer Science Pathway HOUSTON COMMUNITY COLLEGE

To earn a bachelor’s degree from National University students must complete a minimum of 180 quarter units. Requirements include but are not limited to the university’s general education program (to include upper division and cultural diversity), the preparatory courses listed below, major core coursework and any additional courses necessary to fulfill overall program requirements.

The table below maps National University’s Foundation of Computer Science courses to equivalencies identified at **HOUSTON COMMUNITY COLLEGE**.

HOUSTON COMMUNITY COLLEGE	NATIONAL UNIVERSITY
Equivalent Transfer Course	Preparatory Courses Required
MATH2412- Pre-Calculus Math	MTH215- College Algebra & Trigonometry
MATH2413- Calculus I	CSC208- Calculus for Comp Science I
No equivalent course at HCC	CSC209- Calculus for Comp Science II
No equivalent course at HCC	CSC220- Applied Probability & Statistics
COSC1436- Programming Fundamentals I	CSC242- Intro to Programming Concepts
COSC1437- Programming Fundamentals II	CSC252- Programming in C++
COSC2436- Programming Fundamentals III	CSC262- Programming in JAVA
INEW2438- Advanced Java Programming	CSC272- Advanced Programming in Java
Students must select two (2) science related courses with labs from Area F of the General Education for a total of 12 quarter units. Students must select one (1) additional mathematics or science course without duplicating any of the courses in the program. The mathematics course must be beyond pre-calculus and beyond the level of MTH 215 (i.e. have MTH 215 as a prerequisite). The program director must approve your course selection.	
REQUIREMENTS FOR THE MAJOR (17 courses; 73.5 quarter units)	
CSC 300 Object Oriented Design	CSC 342 Computer Architecture
CSC 350 Computer Ethics	CSC 400 OS Theory and Design
EGR 320 Scientific Problem Solving	CSC 422 Database Design
CSC 310 Linear Algebra and Matrix Comp	CSC 436 Comp. Communication Networks
CSC 331 Discrete Structures and Logic	CSC 430 Programming Languages
CSC 335 Data Structures and Algorithms	CSC 480A Computer Science Project I
CSC 338 Algorithm Design	CSC 480B Computer Science Project II
CSC 340 Digital Logic Design & CSC 340 Lab.	CSC 480C Computer Science Project III
APPROVED ELECTIVES (4 courses; 18 quarter units)	
The program requires 4 Upper Division Technical Electives. Students may customize and select four courses from the approved list below.	
CSC 441 Web App Development	CIS 310 Technology Project Management
CSC 443 Mobile App Development	CIS 320 Systems Analysis & Integration
CSC 447 Software Testing & Automation	CIS 475 Big Data and Cloud Computing
CSC 449 Software Engineering	CIS 430 Web/EB Design & Development
CSC 450 Artificial Intelligence	CYB 331 Secure Linux System Admin
CIS 301 Mgmt Information Systems	CYB 332 Secure Windows Administration
	CYB 333 Security Automation

Note: These requirements are subject to change. Please see [National University’s Online General Catalog](#) for official record of requirements for the year you are admitted.

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