

Bachelor of Science

THE UNIVERSITY OF TEXAS AT BROWNSVILLE
COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY
SCHOOL OF ENGINEERING AND COMPUTATIONAL SCIENCE



Computer Scientists possess strong foundations in computer architecture and algorithms allowing them to apply innovative computing technology to automate processes and to solve problems effectively and efficiently. Areas of application include the design, implementation, research, and study of computing fields such as computer information systems, networking, databases, computer security, web development, software development, and computer graphics. Employment opportunities include positions in software development and research, database systems, networking and data communications. Graduates of this program are prepared for graduate studies in computer science at master and doctorate levels. The Bachelor of Science in Computer Science is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.

GENERAL EDUCATION CORE COURSES REQUIRED FOR THE MAJOR

Students seeking the Bachelor of Science in Computer Science must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education Core requirements. For any additional information, please contact the Academic Advising Center.

020 – Mathematics (†)

MATH 2413 Calculus I

090 – Institutionally Designated Option

SPCH 1315 Applied Communication

030 – Natural Science

PHYS 2325/2125 University Physics I / Lab I

PHYS 2326/2126 University Physics II / Lab II

A – GENERAL EDUCATION CORE – 42 HOURS**B – MAJOR REQUIREMENTS – 71 HOURS****1 – Computer Science Foundation – 33 hours**

COSC 1336 Programming Fundamentals I (†)

COSC 1337 Programming Fundamentals II (†)

COSC 2312 Digital Logic (†)

COSC 3316 Web Programming and Design

MATH 2318 Linear Algebra

COSC 2325 Machine Language and Computer Organization

2 – Computer Science Core – 25 hours

COSC 2336 Programming Fundamentals III

COSC 3325 Computer Architecture

COSC 4313 Computer Networks

COSC 3345 Algorithm Analysis

COSC 3355 Principles of Programming Languages

3 – Computer Science Electives – 13 hours

(12 hours must be advanced 3000, 4000 level)

COSC 2310 Discrete Structures (†)

MATH 3381 Statistics

MATH 2413 Calculus I*

MATH 2414 Calculus II

MATH 2415 Calculus III

COSC 4310 Operating Systems

COSC 4346 Software Engineering

COSC 4190 Senior Project

COSC 4342 Database Management Systems

C – RESTRICTED ELECTIVES – 7 – 9 HOURS

a) 3-4 hours from MATH 1348, 2318, 2412, 3349 or any course listed in “Computer Science” or “Mathematics” electives.

b) 4 hours from PHYS 3400, CHEM 1411 or CHEM 1412 or BIOL 1306/1106 or BIOL 1307/1107.

TOTAL CREDIT HOURS FOR GRADUATION – 120 - 122**TOTAL ADVANCED HOURS (minimum) – 36**

† Grade of “C” or better is required for graduation.

* MATH 2413 – 3 sch for general education and 1sch towards major requirements.