

Bachelor of Science in Computer Engineering

2014 - 2015 Catalog

The University of Texas-Pan American

This document provides a list of the UTPA courses required for the major and their equivalent UTRGV courses.

A significant number of courses have changed their course prefix, number, and title.

For any additional information, please visit the Academic Advising Center.

UTPA Courses	Course Equivalents at UTRGV
A – GENERAL EDUCATION CORE – 43 HOURS	
Natural Science – 6 hours	
PHYS 2401 Physics Science and Engineering I	PHYS 2425 Physics for Scientists and Engineers I
PHYS 2402 Physics Science and Engineering II	PHYS 2426 Physics for Scientists and Engineers II
Mathematics – 3 hours	
MATH 1460 Calculus I (or MATH 1487 Honors) three-hour lecture	MATH 2413 Calculus I (or MATH 2487) three-hour lecture
Humanities	
Philosophy and Modern/Classical Language Literature – 3 hours	
PHIL 2390 Professional Ethics	PHIL 2320 Professional Ethics
PHIL 2393 Engineering Ethics	PHIL 2326 Professional Ethics: Engineering
Computer Literacy – 5 hours	
CMPE 1370 Engineering Computer Science I	CMPE 1370 Engineering Computer Science I
B – MAJOR REQUIREMENTS – 68 HOURS (55 advanced)	
1 – Computer Engineering Core – 41 hours (31 advanced)	
CMPE 1101 Introduction to Computer Engineering	CMPE 1101 Introduction to Computer Engineering
CMPE 1170 Engineering Computer Science I Lab	CMPE 1170 Engineering Computer Science I Lab
CMPE 2320/2120 Electrical Circuits I and Lab	CMPE 2320/2120 Electric Circuits I and Lab
CMPE 2330/2130 Digital Systems I and Lab	CMPE 2330/2130 Digital Systems Engineering I and Lab
CMPE 2380 Computer Science II	CMPE 2380 Computer Science II
CMPE 3333 Algorithms and Data Structures	CMPE 3333 Algorithms and Data Structures
CMPE 3334 Systems Programming	CMPE 3334 Systems Programming
CMPE 3340 Software Engineering	CMPE 3340 Software Engineering I
CMPE 3403 Electronics for Computer Engineers	CMPE 3403 Electronics for Computer Engineering
CMPE 4303 Digital Systems II	CMPE 4303 Digital Systems Engineering II
CMPE 4334 Operating Systems	CMPE 4334 Operating Systems
CMPE 4375 Introduction to VLSI	CMPE 4375 Introduction to VLSI Design
<i>Choose one:</i>	
CMPE 4335 Computer Architecture	CMPE 4335 Computer Architecture
CMPE 4380 Computer Architecture	Recommended alternative: CMPE 4335 Computer Architecture
2 – Senior Design – 6 hours (6 advanced)	
<i>Choose one:</i>	
CMPE 4371/4372 Senior Design I and II Software Track	CMPE 4371/4372 Senior Design I and II Software
CMPE 4373/4374 Senior Design I and II Hardware Track	CMPE 4373/4374 Senior Design I and II Hardware
3 – Advanced Computer Engineering Electives – 6 hours (6 advanced)	
4– Concentration – 15 hours (12 advanced)	
i – Software Track – 15 hours (12 advanced)	
CMPE 2333 Computer Organization Assembly Language	CMPE 2333 Computer Organization and Assembly Language
CMPE 3341 Software Engineering II	CMPE 3341 Software Engineering II
CMPE 4333 Database Design & Implementation	CMPE 4333 Database Design and Implementation
CMPE 4345 Computer Networks	CMPE 4345 Computer Networks
<i>Choose one:</i>	
CSCI 3326 OO Programming in Java	CSCI 3326 Object Oriented Programming in JAVA
CSCI 3328 OO Programming in C#	CSCI 3328 Object-Oriented Programming In C#

ii – Hardware Track – 15 hours (12 advanced)

CMPE 2322 Signals and Systems
CMPE 3226 Instrumental Lab
CMPE 3331 Microcomputer & Embedded Systems Lab
CMPE 3437 Microprocessor Systems
CMPE 4390 Communications Networks

C – SUPPORT COURSES – 18 hours (6 advanced)

Choose one:

CHEM 1307/1107 Chemistry for Engineers and Lab
CHEM 1301/1101 General Chemistry I and Lab
MATH 1460 Calculus I (or MATH 1487 Honors) one-hour lecture
MATH 1470 Calculus II (or MATH 1488 Honors)
MATH 3349 Differential Equations
MATH 2346 Math for Electrical Engineers and Computer Engineers

Choose one:

MATH 4339
CMPE 3342 Probability and Statistics for Computer Engineers

CMPE 3322 Signals and Systems
CMPE 3226 Electrical Engineering I Lab
CMPE 3331 Microcontroller and Embedded Systems Lab
CMPE 3437 Microprocessor Systems
CMPE 4390 Communications Networks

CHEM 1307/1107 Chemistry for Engineers and Lab
CHEM 1311/1111 General Chemistry I and Lab
MATH 2413 Calculus I (or MATH 2487 Honors) one-hour lecture
MATH 2414 Calculus II (or MATH 2488 Honors)
MATH 3341 Differential Equations
MATH 2346 Mathematics for Electrical and Computer Engineers

MATH 4337 Probability and Statistics I
CMPE 3342 Internet Programming or
CMPE 3343 Probability and Statistics for Electrical Engineers

TOTAL CREDIT HOURS FOR GRADUATION – 126 HOURS

TOTAL ADVANCED HOURS – 55 HOURS