Applied Computer Science-Post Baccalaureate Course Rotation Guide

Core Courses: Offered Every Term (Including Summer)

Course Code	Course Name	Prerequisites
CSPB 1300 (4)	Computer Science 1: Starting Computing	
CSPB 2270 (4)	Computer Science 2: Data Structures	CSPB 1300
CSPB 2824 (3)	Discrete Structures	CSPB 1300,
CSPB 3104 (4)	Algorithms	CSPB 2270 (co-requisite), CSPB 2824
CSPB 2400 (4)	Computer Systems	CSPB 2270
CSPB 3155 (4)	Principles of Programming Languages	CSPB 2270, CSPB 2824
CSPB 3308 (3)	Software Development Methods and Tools	CSPB 2270

Elective Courses Offered Every Term (Including Summer)

Course Code	Course Name	Prerequisites
CSPB 2820 (3)	Linear Algebra with Computer Science Applications	CSPB 2824
CSPB 3122 (1)	Professional Development in Computer Science	CSPB 2270
CSPB 3702 (3)	Cognitive Science	CSPB 1300 (Co-Requisite)
CSPB 4122 (3)	Information Visualization	CSPB 1300 **or** CSPB 2824 (Co-Requisite)
CSPB 4502 (3)	Data Mining	CSPB 2270

Summer 2024 Additional Elective Course Offerings

Course Code	Course Name	Prerequisites
CSPB 3202 (3)	Intro to Artificial Intelligence	CSPB 2270, CSPB 2824, CSPB 3022
CSPB 3022 (3)	Intro to Data Science with Probability and Stats	CSPB 1300, CSPB 2824

Fall 2024 Additional Elective Course Offerings

Course Code	Course Name	Prerequisites
CSPB 3022 (3)	Intro to Data Science with Probability and Stats	CSPB 1300, CSPB 2824
CSPB 3753 (4)	Design and Analysis of Operating Systems	CSPB 2270, CSPB 2824
CSPB 4622 (3)	Machine Learning	CSPB 2270, CSPB 2824 and CSPB 2820, CSPB 3022
CSPB 4830 (3)	Special Topics: Coding Calculus Seminar*	CSPB 1300

Spring 2025 Additional Elective Course Offerings

Course Code	Course Name	Prerequisites
CSPB 3202 (3)	Intro to Artificial Intelligence	CSPB 2270, CSPB 2824, CSPB 3022
CSPB 3287 (3)	Design and Analysis of Database Systems	CSPB 2270
CSPB 3403 (4)	Introduction to Cyber Security	CSPB 2400

Summer 2025 Additional Elective Course Offerings

Course Code	Course Name	Prerequisites
CSPB 3022 (3)	Intro to Data Science with Probability and Stats	CSPB 1300, CSPB 2824
CSPB 4622 (3)	Machine Learning	CSPB 2270, CSPB 2824 and CSPB 2820, CSPB 3022
CSPB 3287 (3)	Design and Analysis of Database Systems	CSPB 2270

Fall 2025 Additional Elective Course Offerings

Course Code	Course Name	Prerequisites
CSPB 3202 (3)	Intro to Artificial Intelligence	CSPB 2270, CSPB 2824, CSPB 3022
CSPB 3753 (4)	Design and Analysis of Operating Systems	CSPB 2270, CSPB 2824
CSPB 3403 (4)	Introduction to Cyber Security	CSPB 2400

Spring 2026 Additional Elective Course Offerings

Course Code	Course Name	Prerequisites
CSPB 3022 (3)	Intro to Data Science with Probability and Stats	CSPB 1300, CSPB 2824
CSPB 4622 (3)	Machine Learning	CSPB 2270, CSPB 2824 and CSPB 2820, CSPB 3022
CSPB 3287 (3)	Design and Analysis of Database Systems	CSPB 2270

Summer 2025 Additional Elective Course Offerings

Course Code	Course Name	Prerequisites
CSPB 3202 (3)	Intro to Artificial Intelligence	CSPB 2270, CSPB 2824, CSPB 3022
CSPB 3403 (4)	Introduction to Cyber Security	CSPB 2400
CSPB 3287 (3)	Design and Analysis of Database Systems	CSPB 2270

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*CSPB 4830: Special Topics: Coding Calculus Seminar is a special offering only available in the Fall 2024 term.

Course description:
Coding and calculus go hand and hand. With Python code we'll rediscover the original numerical motivations for calculus and illustrate with the concepts visually. In addition, calculus gives us a meaningful motivation to use our coding skills. Based on the book "Calculus in Context," we will explore, code, and visualize differential equations, infinite sequences, derivatives, integrals and model real world systems like pandemics, predator prey models and even wine making. If you are comfortable learning by doing, no coding experience, prerequisites, or calculus experience is required. We will begin with scaffolded code. Algebra is a must. There will be several extensions available for advanced coders and those who have taken calculus. If you have taken calculus, this is a chance to see it in action and get a sneak peek at numerical analysis. If you've never had calculus, it's a great way to finally learn the basics. This course will have Jupyter Notebook assignments, peer reviewed assignments, and plenty of exploration and discussions.