#### PROFESSIONAL CERTIFICATE

# EMBEDDED SYSTEMS ENGINEERING









Intended for Software Developers and Engineers seeking the skills required to design embedded systems.

Learn Embedded C Programming language to write and execute code on real embedded controller hardware. Understand the design of firmware for event-driven programming and gain hands-on experience designing and implementing Interrupt Service Routines. Write real-time event-driven applications running under an embedded Real-Time Operating System (RTOS).

#### AT A GLANCE



**FORMAT**Mostly Online



\$5,165\*



**DURATION** 18 Months

\*Excludes textbooks and materials

#### **PROGRAM HIGHLIGHTS:**

- New curriculum featuring current case studies
- Practicing instructors who bring industry relevance to students
- Program can be completed entirely online
- Classes can be internet accessed anywhere/anytime providing schedule flexibility
- Curriculum taught in accordance with industry standards

#### PREREQUISITES COURSES (OPTIONAL):

- Introduction to Embedded Systems
- C/C++ Programming II: Dynamic Memory and File I/O Concepts

### REQUIRED COURSES: (MUST BE TAKEN IN THE ORDER LISTED)

- Embedded Systems Hardware Design
- Embedded Controller Programming with Embedded C
- Embedded Controller Programming for Real-Time Systems
- Embedded Real-Time Operating System (RTOS)

## ELECTIVE COURSES: (SELECT ANY TWO FROM THE LIST)

- Embedded Systems Hardware Interfacing
- Introduction to IoT & Embedded System
- Embedded Linux
- FPGA Design Fundamentals (FPGA I)
- FPGA II
- Data Acquisition Systems
- Introduction to Autonomous Vehicles (in-class only)

#### **LEARN MORE:**

Richard J. Baran
Program Manager
Technology & Engineering
unexengr@ucsd.edu | (858) 534-915