

# Embedded Medical Devices

BME554L (Fall 2025)

## Table of contents

Module	Materials	Assessment
Zephyr & Nordic SoC Overview	<a href="#">Lecture Notes &amp; Slides</a>	Completion Survey (Gradescope) <a href="#">Software Installs &amp; Tutorials</a>
Event-Driven State Machines	<a href="#">Lecture Notes &amp; Slides</a>	<a href="#">Event-Driven State Machine Lab</a>
Version Control ( <a href="#">git</a> )	<a href="#">Lecture Notes &amp; Slides</a>	Git Fundamentals Quiz (Gradescope) <a href="#">Git Fundamentals Lab</a>
C Programming	<a href="#">Lecture Notes &amp; Slides</a>	C Programming Quiz (Gradescope) <a href="#">C Programming Lab</a>
Devicetree, GPIO & Callbacks; Debugging	<a href="#">Lecture Notes &amp; Slides</a> <a href="#">Nordic DevAcademy Lesson 2: Reading Buttons &amp; Controlling LEDs</a> <a href="#">Debugging DevAcademy Module</a>	<a href="#">DT/GPIO/CB Lab</a>
Timers & Work Queues	<a href="#">Lecture Notes &amp; Slides</a>	<a href="#">Timers Lab</a>
Threads & Kernel Events	<a href="#">Lecture Notes &amp; Slides</a> <a href="#">Zephyr RTOS: Beyond the basics</a>	<a href="#">Heartbeat &amp; Kernel Events</a> <a href="#">Refactor Lab</a>
State Machine Framework	<a href="#">Lecture Notes &amp; Slides</a>	<a href="#">State Machine Framework</a> <a href="#">Refactor Lab</a>
Analog-to-Digital Conversion (ADC)	<a href="#">Lecture Notes &amp; Slides</a> <a href="#">Nordic DevAcademy: ADC</a>	<a href="#">ADC Lab</a>
Pulse Width Modulation (PWM)	<a href="#">Lecture Notes &amp; Slides</a> <a href="#">Nordic DevAcademy: PWM</a>	<a href="#">PWM Lab</a>

Module	Materials	Assessment
Serial Communications	<a href="#">Lecture Notes &amp; Slides</a> <a href="#">UART DevAcademy Module</a> <a href="#">Serial Communication DevAcademy Module</a>	None
Bluetooth Low Energy (BLE)	<a href="#">Lecture Notes &amp; Slides</a> <a href="#">DevAcademic: BLE (Lessons 1-4)</a>	<a href="#">ECG &amp; Temperature Sensing</a> <a href="#">BLE Device</a>