

Carnegie Mellon

Tentative Course Calendar

18-349/14-642: *Introduction to Embedded Systems* **Spring 2020**

| A | Class Activity | Lab Activity |
|------|--------------------------------------|--|
| 1/14 | L1: Introduction – Course Overview | |
| 1/16 | L2: PCB Lecture (Design) | Lab 0 (PCB) Out |
| 1/21 | L3: PCB Lecture 2 (Manufacturing) | |
| 1/23 | L4: ARM Architecture | Lab 0 Due, Lab 1 (Boot+ASM) Released |
| 1/28 | L5: ARM ASM Overview | |
| 1/30 | L6: ARM Profiling and Optimization | |
| 2/4 | L7: Memory Mapped I/O and Buses | |
| 2/6 | L8: Serial Protocols | Lab 1 Due, Lab 2 Released (Interfacing) |
| 2/11 | L9: Sampling, ADCs, DACs | |
| 2/13 | L10: Sensors and Actuators | |
| 2/18 | L11: Timers, Interrupts | |
| 2/20 | L12: SVC, Syscalls | Lab 2 Due, Lab 3 Release (Syscalls) |
| 2/25 | L13: Processes and Memory Management | |
| 2/27 | L14: Mid-term Review | |
| 3/3 | MIDTERM EXAM | |
| 3/5 | L15: Scheduling and Concurrency | |
| 3/10 | Spring Break - No Class | |
| 3/12 | Spring Break - No Class | |
| 3/17 | L16: Real-Time Scheduling 1-2 | Lab 3 Checkpoint Due |
| 3/19 | L17: Real-Time Scheduling 2-2 | |
| 3/24 | L18: RTOS Design and Implementation | Lab 3 Due, Lab 4 (RTOS Kernel) Released |
| 3/26 | L19: Multi-Core and SoC | |
| 3/31 | L20: Embedded Power Management | |
| 4/2 | L21: Real-Time Communication | Lab 4 Checkpoint Due |
| 4/7 | L22: Embedded Wireless Communication | |
| 4/9 | L23: Embedded Control | |
| 4/14 | L24: RT-Linux + LKM | L 4 Due, Lab 5 (System Integration) Released |
| 4/16 | Carnival – No Class | |
| 4/21 | L25: Safety Critical | |
| 4/23 | L26: Embedded Security | _ |
| 4/28 | L27: Advanced Topic | _ |
| 4/30 | L28: Course Wrap-up | Lab 5 Due |
| | FINAL EXAM PERIOD | |