An important aspect of embedded system design is being able to communicate effectively using the technical vocabulary associated with embedded systems. You should be able to define and communicate using the following terms before the end of the semester.

- Embedded System, Microprocessor, Microcontroller
- RAM, SRAM, DRAM, NVRAM, DDR, DMA
- ROM, EPROM, EEPROM, Flash Memory, OTP
- Oscillator, Crystal, Start-up Time, Clock Oscillator
- Clock, Race Condition, Glitch, Jitter, Eye Diagram
- Reset, Power-on, Manual, Brown-out
- Noise, Ground Bounce, Noise Margin, Bus, Crosstalk
- Transmission Line, Ringing, Reflections, Termination
- EMI, EMC, Ground/Power Plane, Signal Integrity
- CMOS, TTL, Logic Families, Switching Threshold
- Totem-Pole Output, Open Collector/Open Drain Output
- Fan-out, Fan-in, Pull-up/Pull-down Resistor, Floating Contention, Drive Fight, Wire-OR/Wire-AND
- Bypass/Decoupling Capacitor, ESR
- In-rush Current, Voltage Droop
- Transistor, MOSFET, BJT, Beta
- Diode, Switching, Power, Zener, LED
- Clamping Diode, Protection Diode
- Interrupt, NMI, Maskable, Edge/Level Triggered
- Voltage Regulator, Thermal Grease, Heat Sink
- Multiplexer, Multiplexed Address/Data
- Buffer, Latch, Flip-Flop, State Machine
- IC, ASIC, LSI, VLSI, Integration
- Propagation Delay, Setup/Hold Time
- Glue Logic, Chip Selects, PLD, FPGA, PAL/GAL
- Address Decoding, Complete, Incomplete
- Address Space, Memory Map, Aliasing, Ghosting
- EPROM Emulator, Device Programmer
- In-Circuit Emulator (ICE), Breakpoints, Traces
- Debugger, JTAG, Scan Chain, Boundary Scan
- Logic Analyzer, Pod, Disassembler, Trigger
- ESD, Antistatic, Conductive, ‘Walking Wounded’
- Serial/Parallel Communication, SERDES
- Asynchronous/Synchronous
- RS-232, RS-422, RS-423, RS-485, SPI, I2C, USB
- Op-Amp, Gain-Bandwidth Product, Slew Rate
- Frequency Response, Unity Gain Buffer
- Reconfigurable Logic, SoC, Platform FPGA
- Cache, Pipeline, Embedded Core
- Peripheral (PIC, PIT, LCD, etc.)
- ADC, DAC, Resolution, Monotonic
- Successive Approximation, Flash Conversion
- Schematic, Wiring Diagram, Block Diagram, Layout
- Wire-wrapping, Soldering, Cold Solder Joint
- PCB, PCA, PWB, PWA, Via
- Supervisory Circuit
- Watchdog Timer, Low Voltage Detector
- Transient Failures, Memory Hits, Signature Byte
- Error Handling, ECC, EDC
- RoHS, Pb Free, Green

Exception, Trap, Interrupt
Vector Table, Reset Vector, Re-vectored Interrupt
ISR, Interrupt Service Routine, Interrupt Handler
Build Process, Editor, Preprocessor, Compiler
Assembler, Disassembler, Inline Assembly
Linker, Linkage Editor, Resolving
Profiler, Optimizer, Types of Optimization
Simulator
Monitor, Debugger, Source Level Debug
Tracepoint, Trace Buffer
Target, BSP, Board Support Package, Host Interpreter
Source Code, Object/Machine Code, Library
Relocatable Object Code, Reentrant
Stack, Heap, Stack Pointer, Malloc, Free
Register, Register Variable
Interrupt Masking, Priorities, Latency
OS, RTOS (VxWorks, PSOS+, etc.), Executive
Processes, Tasks, Multi-tasking, Deadline
Preemptive, Cooperative, Time Slice, Scheduling
Context Switch
Blocked, Deadlock, Priority Inversion, Round Robin
Interprocess Communication, Messages, Mailbox
Queues, Signals, Semaphores, Mutex
Critical Section, Atomic Operation/Instruction
Resource Protection
Firmware, Embedded Software
Initialization Code, 'C Machine', Boot, Startup, POST
Memory Test, Walking 1’s
Pointer, Dereferencing, Uninitialized
Main Loop, Infinite Loop
Interrupt Driven, Polling
Firmware State Machine
Big-Endian, Little Endian, Byte Order/Swapping
Native Word Size
Globals, Locals, Initialized, Uninitialized
Scoping of variables and functions
Binary, ASCII, Hex
Hex Records, Intel, Motorola
Unsigned/Signed Variables
Function Prototype
Data Structures, Linked List, Struct, Union
FIFO, Circular Buffer
Condition Codes
Bandwidth, Throughput, Latency, Utilization
Floating Point, Coprocessor, Floating Point Library
Bank Switching
Switch Bounce, Software/Hardware Debouncing
Serial Interface, Bit Banging
I/O, GPIO