Attn: Computer Science & Informatics Students

Hardware System Design I

Spring **2018**

CSCI-C 421 **CSCI-B 541**

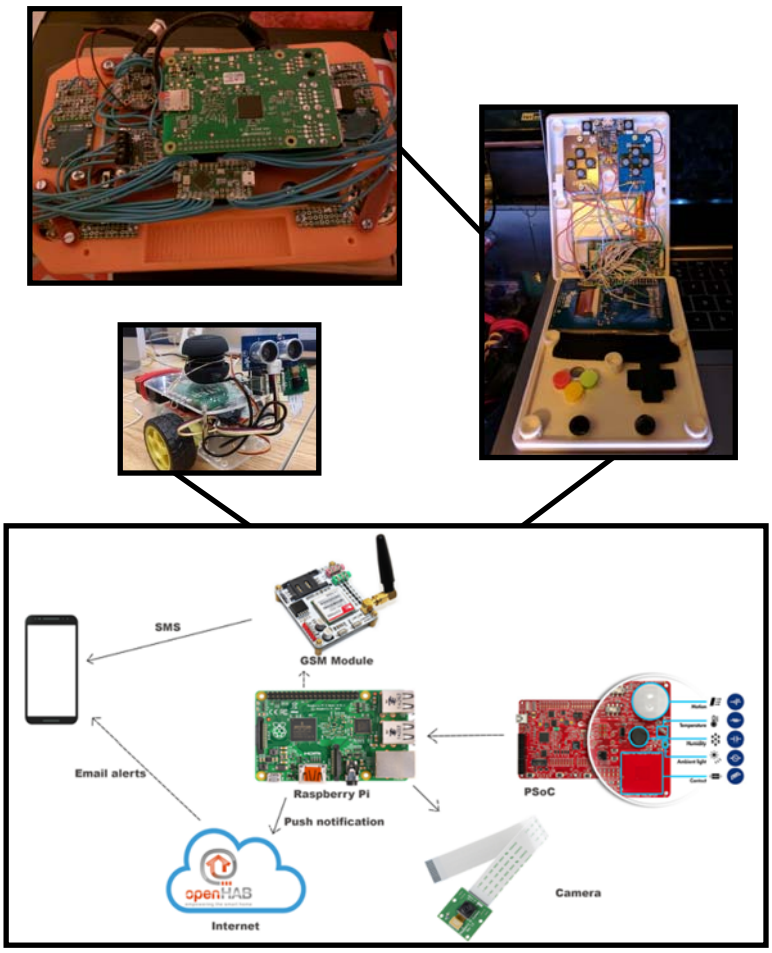
Instructor: Dr. Liqiang Zhang, (liqzhang@iusb.edu)

Prereq: CSCI-C 335

When: Tuesday & Thursday 1:00-2:50pm

Description:

The course is about organization and logic design of digital systems. Course presents a structured design philosophy, emphasizing hardware building blocks, circuit synthesis, and hardware description language. In the laboratory students build, study, and debug a working processor from elementary hardware components as well as work with popular ARM processors to build embedded systems. As a **hands-on lab -oriented course**, topics covered in lectures will be explored through challenging laboratory exercises/projects, where Raspberry Pi and DeO-Nano-SoC will be used as the platforms.



LEARNING OBJECTIVES:

- ◊ Introduction and Fundamentals
- ◊ Combinational Logic Design
- ◊ Sequential Logic Design
- ◊ Hardware Description Languages
- ◊ Digital Building Blocks
- ◊ ARM Architecture
- ◊ Microarchitecture
- ◊ Memory Systems
- ◊ I/O Systems

If you are self-motivated, hard-working, and want to build your own CPU, smart devices, gadgets, or robots, this is the course for you!

10/2017