COMPUTER DESIGN/ARCH. (CDA)

CDA 3104 - Comp Org'n & Assem Lang Prog (3 Credits)
Covers the basic concepts of computer organization using a computer platform or a simulator and the corresponding assembly language. Topics include Boolean algebra, logic gates, registers, memory models, CPU structures, basic assembly instructions, procedures, stack frames, and interrupt handling.
Prerequisite(s): (PHY 2048C or (PHY 2048 and PHY 2048L)) and COP 2006

CDA 3200 - Digital Systems & Architecture (3 Credits)
This course covers design and application of data paths, controllers, memory systems, and registers involved in digital systems. It discusses aspects of traditional and modern computer architecture. Design topics include finite state machines, logic gates, and Boolean algebra.
Prerequisite(s): COP 2006 and (PHY 2048C or (PHY 2048 and PHY 2048L))

CDA 4150 - Computer Architecture (3 Credits)
Covers the form, function, and cost-performance tradeoffs associated with a range of computer systems implementing sequential, parallel, and distributed system models. RISC and CISC systems, as well as memory and I/O models are explored. Topics include instruction set design, processor microarchitecture, pipelining, cache and virtual memory organization, protection and sharing, I/O, interrupts, and peripherals.
Prerequisite(s): (PHY 2049C or (PHY 2049 and PHY 2049L)) and (CDA 3104 or CDA 3200)