MY1 Electronics Engineering Program

This is my 'fantasy' curriculum for an electronics engineering program - complete with course codes 😎

Note: planned for a 4-year program with 7 academics semesters (1 semester for practical training)

I		II		III		IV		V		VI		VII	
Circuit Theory	3	Electric Machines	3			EM Theory	3						
Semiconductor Devices	3	Analog 1	3			Analog 2	3	Instrumentation	3				
		Digital 1	3	Digital 2	3	Microprocessor	3	Microcontroller	3	Computer Architecture	3	Operating Systems	3
Programming 1	3			Programming 2	3								
				Signal & Systems	3			Communication System	3				
						Basic IC Design	3	Digital IC Design	3	Analog IC Design	3	System on Chip	3

Fundamental Series:

- [EEC101] Circuit Theory : ohms law, kirchoffs law, circuit analysis (loop, mesh, superposition, etc)
- [EEC110] Semiconductor Devices : Semiconductor theory, PN junction, diode, triode, transistors
- [EEC111] Analog 1 : bipolars BJT, mos/mes-FETs, basic amplifiers
- [EEC211] Analog 2 : differential amplifiers, op-amp, current mirrors
- [EEC120] Computer Programming 1 : algorithms/flow chart, variables/data, branch, loop, sub-routines, file access
- [EEC220] Computer Programming 2 : project management (makefiles?), GUI programming
- [EEC121] Digital 1 : base-n numbers, basic logic (truth table, boolean equation, boolean algebra, POS/SOP form), combinational logic (basic gates), combinational logic implementation (e.g. adder), sequential logic (basic flip-flop)
- [EEC221] Digital 2 : combinational logic circuits (mux, decoder, encoder), sequential logic circuits (registers, counters), state machines

Applied Series:

- [EEC102] Electric Machines :
- [EEC222] Microprocessor : basic microprocessor system, addressing, instruction set
- [EEC203] Signal & Systems :
- [EEC230] Communication Systems :
- [EEC204] Electromagnetic Theory :
- [EEC224] Instrumentation :

Specializations (Computing):

- [EEC322] Microcontroller
- [EEC323] Computer Architecture

- [EEC420] Operating Systems ([eec420_lab|Lab])

Specializations (Microelectronics):

- [EEE215] Basic IC Design : transistor level netlist, simulation, layout
- [EEE315] Digital IC Design
- [EEE325] Analog IC Design
- [EEE425] System on Chip

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