MITx 6.002.1x
Circuits and Electronics 1: Basic Circuit Analysis

Syllabus

Week* 1

Topics	Lumped circuit abstraction, circuite elements, KVL, KCL, simplification techniques, nodal analysis
Readings**	1, 2.1-2.5, 3.1-3.5
Graded assignments	HW1, Lab1

Week 2

Topics	Linearity, superposition, Thevenin & Norton methods, digital abstraction, Boolean logic, combinational gates
Readings	3.5-3.6, 5.1-5.4, 5.6-5.7
Graded assignments	HW2, Lab2

Week 3

Topics	MOSFET switch, MOSFET switch models, nonlinear resistors, nonlinear networks
Readings	6.1-6.8, 4.1-4.3
Graded assignments	HW3, Lab3

Week 4

Topics	Small signal analysis, small signal circuit model, dependent sources, analog amplification
Readings	4.5, 2.6, 7.1-7.2
Graded assignments	HW4, Lab4

Final Exam

* The term “Week”is used to indicate the length of time allocated for the topics listed in the original 6.002x course. It is also the pace at which the course is taught at MIT. Since this course is self-paced, you may choose to allocate more or less time to study the materials. The suggested workload for this course is approximately 6 hours per “week”.

** Readings refer to sections in the course textbook.