

Tentative Course Outline:

The weekly coverage might change as it depends on the progress of the class. However, you must keep up with the reading assignments. It is recommended that you attempt the assignment problems, tutorial problems will be taken up during the tutorial.

Week	Content	Readings	Assignments) (problems, computation)
Jan. 6,8	<ul style="list-style-type: none">• Introduction• Electric Charges and Fields	<ul style="list-style-type: none">• chapter 5• intro Python, Jupyter (tutorial)	<ul style="list-style-type: none">• Assignments available in learn dropbox: Assignment 1 (Chapter 5: problems 45, 48, 56, 63, 68, 94, 106)• Computing 1 - Charges in a conductor and Gauss's Law, due: Monday Jan. 28.
Jan. 13, 15	<ul style="list-style-type: none">• Electric Field (Gauss' law)	<ul style="list-style-type: none">• Chapter 6	<ul style="list-style-type: none">• Assignments available in learn dropbox
Jan. 20, 22	<ul style="list-style-type: none">• Electrical potential	<ul style="list-style-type: none">• Chapter 7	<ul style="list-style-type: none">• Assignments available in learn dropbox
Jan. 27, 29	<ul style="list-style-type: none">• Capacitance	<ul style="list-style-type: none">• Chapter 8	<ul style="list-style-type: none">• Assignments available in learn dropbox• Computing 2 - Charging and Discharging RC circuits, due: Friday Feb. 15.
Feb. 5, 7, 12	<ul style="list-style-type: none">• Current and Resistance• Direct Current Circuits	<ul style="list-style-type: none">• Chapters 9, 10	<ul style="list-style-type: none">• Assignments available in learn dropbox
Feb. 14, 26	<ul style="list-style-type: none">• Magnetic Forces and Fields• Sources of Magnetic Fields	<ul style="list-style-type: none">• Chapters 11, 12	<ul style="list-style-type: none">• Assignments available in learn dropbox• Computing 3 - Calculating the magnetic field with the biot savart law, due: Friday March. 15.

Week	Content	Readings	Assignments) (problems, computation)
Mar 5, 7, 12	<ul style="list-style-type: none">• Electromagnetic induction• Inductance	<ul style="list-style-type: none">• Chapters 13, 14	<ul style="list-style-type: none">• Assignments available in learn dropbox
Mar. 14, 19, 21	<ul style="list-style-type: none">• AC, EM waves	<ul style="list-style-type: none">• Chapters 15, 16	<ul style="list-style-type: none">• Assignments available in learn dropbox
Mar. 26, 28	<ul style="list-style-type: none">• Light, Optics (Fermat's principle, reflection, refraction, lens, mirrors)	<ul style="list-style-type: none">• Chapters 1, 2 (optics)	<ul style="list-style-type: none">• Assignments available in learn dropbox• Computing 4 - Shadows, ray optics, due: Friday April 5.
Apr. 2, 4	<ul style="list-style-type: none">• Interference, Diffraction, coherence	<ul style="list-style-type: none">• Chapters 3, 4 (optics)	<ul style="list-style-type: none">• Assignments available in learn dropbox
April 4 (tutorial)	<ul style="list-style-type: none">• review	<ul style="list-style-type: none">• review	<ul style="list-style-type: none">• review