



**PHYSICS**  
**Science**  
**Electricity & Magnetism**  
203-NYB-05 (all sections)  
Fall 2016

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**Teachers**

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**Intensive course conflicts**

If a student is attending an intensive course, the student must inform the teacher, within the first two weeks of class, of the specific dates of any anticipated absences.

**Policy on religious observance**

Students who intend to observe religious holidays must inform their teachers in writing as prescribed in the ISEP Policy on Religious Observance (ISEP Section III-D), within the first two weeks of the semester. Forms for this purpose are available from your teacher. Your teacher will inform you of any modifications to planned course activities resulting from the teacher's own religious commitments.

**Course content**

The material to be covered is contained in the following chapters and sections of **Physics for Scientists and Engineers by Serway & Jewett, 9th edition.**

Weeks	Topics	Chapter & Section
1{3	Electric fields	Ch.23: 1{7
3{4	Gauss's law	Ch.24: 1{4
4{6	Electric potential	Ch.25: 1{6 (7 & 8 optional)
7{8	Capacitance and dielectrics	Ch.26: 1{4 (5, 6 & 7 optional)
8{9	Current and resistance	Ch.27: 1, 2, 4{6 (3 optional)
9{10	Direct-current circuits	Ch.28: 1{5
11{12	Magnetic fields	Ch.29: 1{4 (5 & 6 optional)
12{13	Sources of the magnetic field	Ch.30: 1{5 (6 optional)
13{14	Faraday's law	Ch.31: 1{5 (6 optional)
15	Inductance	Ch.32: 1, 2 (3{5 optional)
	Alternating-current circuits (time permitting)	Ch.33: 1{9

The material to be covered is contained in the following chapters and sections of **Physics for Scientists and Engineers by Knight, 4th edition.**

Weeks	Topics	Chapter & Section
1	Electric charges and forces	Ch.22: 1{5
2{4	The electric field	Ch.23: 1{6 (7 optional)
5	Gauss' law	Ch.24: 1{6
6{7	The electric potential	Ch.25: 1, 2, 4{7 (3 optional)
7{8	Potential and field	Ch.26: 1{6 (7 optional)
9	Current and resistance	Ch.27: 1{5
10{11	Fundamentals of circuits	Ch.28: 1{9
12{14	The magnetic field	Ch.29: 1{8 (9 & 10 optional)
15	Electromagnetic induction	Ch.30: 1{5 (6{8 optional)
	AC circuits (time permitting)	Ch.32

**Comprehensive examination** Second-year students can opt to complete the independent study portion of their comprehensive examination in this course. (This option is not available in continuing education courses.) The project will be

**CQuestions**