Syllabus: Physics 152, Spring 2017

Professor:	Keith Berland, N224 Math Science Center
Email:	kberlan@emory.edu
Tel:	404-712-9061
Office Hours:	Monday 12:00-1:00 and Thursday 1:00 – 2:00
Text:	Physics for Scientists and Engineers with Modern Physics, Technology Update (9th edition, Serway, Jewett)
WebAssign:	**Class Key: emory 1569 2134**
Physcis Mentor Session: Thursdays at 8:00 PM with Andy Kim	

This course provides an introduction to electricity, magnetism, light, and optics. These areas of physics are extremely important. How do motors and generators work? Why are some materials transparent and others opaque or reflective? How do electric charges behave in circuits, and what useful things can we do with that understanding? The topics you learn in this class will help you understand the answers to questions like these.

The class will have a problem solving focus that will help you to develop your physical intuition and critical thinking skills. **Calculus is required!** This course covers a lot of material at a fast pace and the content of each chapter builds on the previous chapters. It is important not to fall behind! You can most easily manage this course by devoting some time to studying and homework problems every day. **Please feel free to ask for help.**

Homework: All homework assignments are handled through WebAssign. The class key is emory 1569 2134. Homework will be due each week on Mondays and Fridays. No late homework is accepted.

Exams. There are three in-class midterm exams, scheduled for **February 2**, **February 28**, and **April 4**. The final exam is scheduled for **April 27th, 8:00-10:30 AM**. You must notify my at least one week in advance of any excused absences (note from a coach or academic dean). There will be a 10% penalty for any unexcused make-up exams.

Grading:

Midterm Exams: 40% (10% for your lowest test grade and 15% for the other two)
Final Exam: 30%
Lab: 20% Note: You must pass the lab to pass the course
Homework: 10%

Letter grades will be dermined as follows: A: 93-100, A-:90-93, B+: 87-90, B: 83-87, etc.

Labs: Labs begin the week of Jan 23. For questions about labs please contact Mr Cordell Donofrio. Email: cjdonof@physics.emory.edu

The **Emory Honor Code** is in effect throughout the semester. By taking this course, you affirm that it is a violation of the code to cheat on exams, to plagiarize, to deviate for the teacher's instructions on graded work, to give false information to a faculty member, and to undertake any other form of academic misconduct. You agree that the teacher is entitled to move you to another seat during an exam, without explanation. You also affirm that if you witness others violating the code you have a duty to report them to the honor council.

Physics 152

Professor: Keith Berland, Office MSC N224

Text: Serway and Jewett, Physics for Scientists and Engineers 9th edition with technology update

Date		Topic	Chapter	Section
1/10/17	Tu	Intro / Calculus/ Electric Fields	23	1-3
1/12/17	Th	Electric Fields		4-7
1/17/17	Tu	Gauss's Law	24	1-3
1/19/17	Th	Gauss's Law		1-4
1/24/17	Tu	Electric Potential	25	1-4
1/26/17	Th	Electrip Potential		5-8
1/31/17	Tu	Current and Resistance	27	1-3, 6
2/2/17	Th	**Midterm Exam I**	Ch. 23-25, 27	
2/7/17	Tu	Magnetic Fields	29	1-4
2/9/17	Th	Mag Fields & Sources of Mag Fields	29, 30	5,6, 1-3
2/14/17	Tu	Sources of Magnetic Fields	30	4-6
2/16/17	Th	Magnetic Fields & Faraday's Law	30, 31	1-4
2/21/17	Tu	Faraday's Law / Review	31	1-5
2/23/17	Th	Electromagnetic Waves	34	1-7
2/28/17	Tu	**Midterm Exam II**	Ch. 29-31	
3/2/17	Th	Light and Ray Optics	35	1-8
3/7/17	Th	*Spring Break*		
3/9/17	Tu	*Spring Break*		
3/14/17	Tu	Image Formation	36	1-4
3/16/17	Th	Image Formation	36	5-10
3/21/17	Tu	Wave Optics	37	1-5
3/23/17	Th	Wave Optics & Diffraction	37, 38	6, 1-3
3/28/17	Tu	Diffraction and Polarization	38	4-6
3/30/17	Th	DC Circuits	28	1-3
4/4/17	Tu	**Midterm Exam III**	Ch. 34-38	
4/6/17	Th	DC Circuits / Capacitors	28, 26	26.1-26.4
4/11/17	Tu	DC Circuits / Capacitors		26.5-26.7, 28.4, 28.5
4/13/17	Th	Inductance	32	1-6
4/18/17	Tu	AC Circuits	33	1-9
4/20/17	Th	Special Topics		
4/27/17	M	**Final Exam 8:00-10:30 AM**		