Physics 122: General Physics II  
Waves, E&M and Modern Physics  
FALL 2014 - sec#5(CRN 56636), sec#6(CRN 57215) & sec#7(CRN 57569)

Location & time:  
Workman 101, Tue. & Thu. 11:00 am - 12:15 pm
Recitations for sec #5:  
Workman 113, Wed. 18:30 pm - 20:30 pm
Recitations for sec #6:  
Workman 113, Tue. 18:30 pm - 20:30 pm
Recitations for sec #7:  
Workman 113, Thu. 18:30 pm - 20:30 pm
Instructor:  
Saska Gjorgjievska
Office:  
Workman 343
E-mail:  
saska at nmt.edu
Phone:  
835-5039
Website:  
www.physics.nmt.edu/~saska/
Office hours:  
Tue. & Thu. 3:30 - 5:00 pm or by appointment

I. COURSE OBJECTIVES AND PREREQUISITES:
The course will provide an introduction to the fundamental laws of physics with specific focus on electromagnetism. Pre-requisites for this course: PHYS 121 and Math 131; Co-requisites: PHYS 122L and MATH 132.

II. READING MATERIAL AND RESOURCES:
Required Textbook: "Physics for Scientists and Engineers" - 3rd edition, by Randall D. Knight (2013), with Mastering Physics supplement. You are welcome to explore additional introductory physics texts. They are available for your perusal in the study room in Workman 110, and at the library.

Class webpage URL:
http://www.physics.nmt.edu/~saska/phys122.html

Online homework (Mastering Physics):
http://www.masteringphysics.com/

MP Course ID: SASKA2014PHYS122

(Please be sure to enter this exactly when you sign up, or there could be many problems to fix if you accidently become enrolled in a different class!)

Homepage for iClickers:
http://www.iclicker.com/
III. Grading:

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<th>Attendance &amp; iclicker:</th>
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<th>GRADES</th>
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<td>Quizzes:</td>
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<td>Homework:</td>
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Attendance & iclickers: At NMT attendance is mandatory in freshman classes, and thus it is expected that you will attend all lectures and recitations. Regular attendance will help you to master the subject. In addition, assignments and announcements will be given during class time; so attending will keep you up-to-date with the course material and expectations. However, if you do miss a class you are responsible for all announcements and material covered in your absence. iclickers will be required to answer conceptual questions in class. It is your responsibility to bring your iclicker to class everyday. If you forget your iclicker your answers won’t be recorded, and this will affect the iclicker portion of your grade. The iclicker questions also serve the purpose of ensuring class participation and attendance. During class you should refrain from using cellphones, tablets, computers, mp3 players, and similar electronic devices.

Quizzes: The quizzes will consist of 5 multiple choice questions similar to those that we solve in the class with the iclickers. If you read your textbook and come to class, you will not have much problem with the quizzes. They will be given during recitations and may not be announced. There will be no make up for quizzes, so I strongly recommend you always attend recitations (10 % of your grade is based on your quizzes scores!).

Homework: Generally, homeworks are assigned weekly and you have one week to complete them. There will be a mix of computer-based (Mastering Physics) and written homework assignments. The written homework assignments will be posted on the course website. Late assignments will not be accepted, unless extension is approved in advance. Written assignments will be due at the beginning of class on the due date (Turning in the assignment after class will be considered late and therefore will not be accepted!). Due dates for homeworks will be announced in class and posted on the course website. The written assignments will be discussed during the recitation periods, so it is in your best interest to attend recitation. Every week you’ll have extra credit options in the homework. Take advantage of this.

[Academic Integrity: While, you are encouraged to study together and to discuss information and concepts covered in class with your classmates, you should also be aware of the Academic Honesty policy included in the NMT 2013-2014 Course Catalog - pages 59-70. Please share the workload and be fair about it. The work that you turn in should be written by you, even if you have worked together on an assignment. Penalties for
violations of this policy may lead to failure of the course and disciplinary actions].

*Exams:* We will have 3 in-class exams throughout the semester, and a mandatory comprehensive final. Calculators are not only allowed, but encouraged! However, cell phones and other internet-ready devices (even if an “app” on one is your calculator) are forbidden during exams - a simple calculator which has trig functions typically only cost a few dollars, so get one if you need to. The exams will be closed book and closed notes, with the exception that you are allowed to construct a ‘cheat sheet’ for each exam. This should consist of writing on one side only of a single 8.5 by 11 inch sheet of paper. Creating your cheat sheet is a good way to help study for the exams. Once I give the graded exams back, you will have two business days to submit a written statement to appeal your grade, should you believe that it is incorrect. Be advised that just as I could give a higher grade in review of the exam, I may see that a lower grade is deserved if I consider I have been originally too generous.

V. Tentative List of Topics:
Announcements will be made in class and posted in the course website if any changes are made to this tentative list of topics.

1. Ray Optics (Chapter 23)
2. Travelling Waves (Chapter 20)
3. Superposition (Chapter 21)
4. Wave Optics (Chapter 22)
5. Electric Charges and Forces (Chapter 25)
6. The Electric Field (Chapter 26)
7. Gauss's Law (Chapter 27)
8. The Electric Potential (Chapter 28)
9. Potential and Field (Chapter 29)
10. Current and Resistance (Chapter 30)
11. Fundamentals of Circuits (Chapter 31)
12. The Magnetic Field (Chapter 32)
13. Electromagnetic Induction (Chapter 33)
14. Electromagnetic Fields and Waves (Chapter 34)

VI. Special Needs: Students with disabilities are encouraged to contact the Counseling and Health Center to verify their eligibility for appropriate accommodations. Except for unusual circumstances, request for academic accommodations are to be made during the first three weeks of the semester.

VII. Emergency Notification System: If you have not done so already, it is recommended that you register for the Emergency Notification System. May there be any concerns regarding campus safety, you will be notified via text. Here is the link:
http://www.nmt.edu/cat-campus-police/4002-emergency-notification-system
In addition, if you must report an emergency situation, please call Campus Police at 575.835.5434.
VIII. COUNSELING SERVICES New Mexico Tech offers mental health and substance abuse counseling through the Office of Counseling and Disability Services. The confidential services are provided free of charge by licensed professionals. To schedule an appointment, please call 835-6619.