Physics 111: Basic Physics I

Instructor	Brock Russell	
Office	Physics 321	
Email	brussell@umbc.edu	
Office Hours	W 11 am - noon	
	Th 3:30 - 4:30 pm	
	And by appointment	

Class Information

Time	MWTh 1 - 3:15 pm	
Location	Physics 101	
Lab	MW 10:30 am - 12:20 pm	TA: Brittany Bonsall
	MW 3:30 - 5:20 pm	TA: Amanda Dotson
	MW 6 - 7:50 pm	TA: Peter Breiding
	TuTh 10:30 am - 12:20 pm	TA: Lipi Mukherjee
Lab Location	Physics 108	

Textbook Information

Title	College Physics, 2nd Edition
Author	Randall Knight
ISBN	9780321595492

MasteringPhysics Information

Course ID: **MPRUSSELL79159**

Required Materials

Scientific calculator
Mastering Physics Access Code
Clicker

Course Description

This algebra-based physics course serves as the first semester in a two-semester series. It will introduce you to several very important concepts in physics including Newton's law of motion, kinematics, energy conservation, gravity, angular and rotational motion, and some thermodynamics. Expect to do a lot of work in this class.

Learning Objectives

By the end of this course, you will be able to...

- interpret the physical world based on physical principles
- construct mathematical models of simple physical systems
- apply and describe problem solving strategies and assess problem results based on physical intuition

- successfully solve physics MCAT problems

Attendance
While attendance in class is not officially required, response to in-class clicker questions and participation in in-class group work will be graded. Class attendance will be valuable to your learning....I assume that's why you signed up!

If you know of any planned absences (with a valid excuse), let me know as soon as possible and make arrangements to turn in the homework in advance. If you have an unexpected absence (for medical or other emergencies), let me know as soon as possible; arrangements will be made on a case by case basis.

Assignments

Assignment	Description	Weight
MasteringPhysics Homework Sets	Several problems, due most class days at noon via MasteringPhysics	20%
Written Homework Sets	Several problems, due several times during the term	15%
Participation	Response to in-class clicker questions, graded for completion not correctness (but try your best) - 7.5% Participation in group problems that will occur frequently - 7.5%	15%
Exams	2 one-hour long in-class, closed-book exams (10% per exam)	20%
Final Exam	Comprehensive, two-hour, closed-book exam on last day of class	20%
Lab	Laboratory experiments and reports	10%

The grade breakdown is as follows (based on percentages):
A: 90 - 100
B: 80 - 90
C: 70 - 80
D: 60 - 70

Homework
MasteringPhysics Online homework sets via MasteringPhysics (course ID **MPRUSSELL79159**), due at noon on *every* class day.

Paper Homework Several problems due at the beginning of class on Wednesdays, following homework procedures described in class.

Late Homework Policy
Completing homework on-time is a vital component of learning in this course. Therefore, homework turned in after the time it is due will receive no credit.

Clicker Questions
Response to in-class clicker questions will be graded for participation (not correctness). For full credit, answer all clicker questions. Two days of clicker questions will be dropped.

Academic Honesty
You should at all times be academically honest. Cheating will not be tolerated. Read the University's policy on academic integrity: http://www.umbc.edu/undergrad_ed/ai/

For Homework: Working in groups is permitted, but you must acknowledge your collaborators on your submitted homework. The write-up that you submit must be your own.

For Clicker Questions: It is not permitted for anyone other than you to respond with your assigned clicker.

For Group Work: Work constructively with your group. You should feel that you contributed a significant part of what your group turns in.

For Exams: All work must be your own. You are permitted to bring one 3x5 notecard (front and back) to each exam. For the final exam, you may bring two notecards. Necessary constants will be provided.

Adjustments for Students with Special Needs
Students requiring accommodations to participate in class activities or meet course requirements should contact me as early as possible in the semester. All information regarding special needs and accommodations will be held in confidentiality, as required by law.

Course Schedule
subject to change

Date	Topic	Chapters
Wednesday, May 28	Course Intro, Units, 1D Motion, Vectors	1
Thursday, May 29	Uniform Motion, Kinematic Equations	2
Monday, June 2	2D Motion, Projectile Motion	3
Wednesday, June 4	Forces, Newton's Laws	4

Thursday, June 5	**Review and Exam 1**	**1 - 4**
Monday, June 9	Applying Newton's Laws	5
Wednesday, June 11	Circular Motion, Gravity	6
Thursday, June 12	Rotational Motion	7
Monday, June 16	Torque, Static Equilibrium	8
Wednesday, June 18	Momentum, Angular Momentum	9
Thursday, June 19	**Review and Exam 2**	**5 - 9**
Monday, June 23	Energy, Work	10
Wednesday, June 25	Using Energy, Thermal Physics	11
Thursday, June 26	Thermal Properties of Matter	12
Monday, June 30	Fluids	13
Wednesday, July 2	Catch-up and Review	
Thursday, July 3	**Final Exam**	**10 - 13**