

Standard Institutionally Developed College: N/A

EDGE Compatible: No

Pre-requisites

- PHYS 1111 - Introductory Physics I (201003)
- PHYS 1111L - Introductory Physics Lab I (201203)

Co-requisites

- PHYS 1112 - Introductory Physics II (201003)

Course Description

Selected laboratory exercises paralleling the topics in PHYS 1112. The laboratory exercises for this course include material from electricity and magnetism, geometric optics, and physical optics.

Course Length

	Minutes	Contact Unit
Lecture:	0	
Lab 2:	0	
Lab 3:	2250	
Practicum/Internship:	0	
Clinical:	0	
Total:	2250	1
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Semester Credit Hours:		1

Competencies

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
1	Laboratory Safety	0	0	60	0	0	60	0
2	Electric Charges, Forces, and Fields	0	0	300	0	0	300	0
3	Electric Potential Energy, Electric Potential, and Capacitance	0	0	300	0	0	300	0
4	Magnetism	0	0	300	0	0	300	0
5	Electric DC Circuits	0	0	400	0	0	400	0
6	Electric AC Circuits	0	0	250	0	0	250	0
7	Electromagnetic Waves	0	0	100	0	0	100	0

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
8	Geometric Optics	0	0	270	0	0	270	0
9	Wave Optics	0	0	270	0	0	270	0
Totals for Course PHYS 1112L - Introductory Physics Lab II (version 201203):		0	0	2250	0	0	2250	1

Learning Outcomes

Laboratory Safety

Order	Description	Learning Domain	Level of Learning
1	Discuss and apply laboratory exercises encompassing the appropriate practice of laboratory precautions and laboratory safety.	Cognitive	Comprehension

Electric Charges, Forces, and Fields

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing electric charges, forces, and fields.	Cognitive	Synthesis

Electric Potential Energy, Electric Potential, and Capacitance

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing electric potential energy, electric potential, and capacitance.	Cognitive	Synthesis

Magnetism

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing magnetism.	Cognitive	Synthesis

Electric DC Circuits

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing electric DC circuits.	Cognitive	Synthesis

Electric AC Circuits

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing electric AC circuits.	Cognitive	Synthesis

Electromagnetic Waves

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing electromagnetic waves.	Cognitive	Synthesis

Geometric Optics

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing geometric optics.	Cognitive	Synthesis

Wave Optics

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing wave optics.	Cognitive	Synthesis

References

Order	Reference Type	Description
1	Book with Author(s) Listed	Giambattista, A. & et al.. (2010). College physics with an integrated approach to forces and kinematics . (3rd). New York, NY: McGraw Hill.
2	Book with Author(s) Listed	Christian, W. & Belloni, M.. (2004). Physlet physics-interactive illustrations, explorations, and problems for introductory physics. (1st). Upper Saddle River, NJ: Pearson Prentice Hall.
3	Book with Author(s) Listed	Cutnell, J. & Johnson, K.. (2006). Physics. (7th). New York, NY: John Wiley & Sons.
4	Book with Author(s) Listed	Giancoli, D.. (2004). Physics, principles and applications. (6th). Upper Saddle River, NJ: Pearson Prentice Hall.
5	Book with Author(s) Listed	O'Kuma, T. & et al.. (2004). Ranking task exercises in physics. (Student). Upper Saddle River, NJ: Pearson Prentice Hall.
6	Book with Author(s) Listed	O'Kuma, T. & et al.. (2006). E&M TIPERs: Electricity and magnetism tasks. (1st). Upper Saddle River, NJ: Pearson Prentice Hall.
7	Book with Author(s) Listed	Serway, R., Faughn, J. & Vuille, C.. (2009). College physics. (8th). Belmont, CA: Brooks/Cole.
8	Book with Author(s) Listed	Wilson, J. & et al.. (2009). College physics with mastering physics. (7th). ? : Pearson/Addison Wesley.
9	Professional Web Site	North Carolina State University: Advanced Instructional Systems, Inc.. (1997-on going). WebAssign: A web-based assessment system providing homework and test delivery, collection, grading, and recording services. Retrieved ?, from http://webassign.net