Jordan University of Science and Technology
Faculty of Science & Arts
Physics Department

PHY101 General Physics (1)
First Semester 2017-2018

Course Catalog
3 Credit Hours. This course is an introductory course in Newtonian mechanics with topics include: kinematics in one and two dimensions, dynamics (Newton's laws of motion), Newton's laws in circular motion, work and energy, collisions, rotational motion and equilibrium of rigid bodies.

Text Book	
Title	Physics for Scientists and Engineers with Modern physics
Author(s)	John W. Jewett and R. Serway
Edition	9th Edition
Short Name	Serway
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Giancoli	Physics for Scientists and Engineers with Modern Physics by	Douglas C. Giancoli	8th Edition	
Halliday	Fundamental of physics	Halliday and Resnick	6th Edition	
Tipler	Physics for Scientists and Engineers	Tipler	6th Edition	

Instructor	
Name	**Dr. Adnan Shariah**
Office Location	PH3 L1

Office Hours	Sun : 08:15 - 09:15 Mon : 10:00 - 11:30 Tue : 11:30 - 13:00 Wed : 10:00 - 11:30 Thu : 11:30 - 13:00
Email	shariah@just.edu.jo

Class Schedule & Room

Section 1:
 Lecture Time: Sun, Tue, Thu : 09:30 - 10:30
 Room: NF40

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Vectors: Coordinate systems, vector and scalar quantities, some properties of vectors, components of a vector and unit vectors, the scalar product of two vectors (7.3), the vector product (11.1)	**Ch. 3** From **Serway**
Weeks 2, 3	Motion in One Dimension: Displacement, velocity and speed, instantaneous velocity and speed, acceleration, one-dimensional motion with constant acceleration, freely falling objects.	**Ch. 3** From **Serway**, **Ch. 2** From **Giancoli**
Week 4	Motion in Two Dimensions: The displacement, velocity and acceleration vectors, two-dimensional motion with constant acceleration, projectile motion, particle in uniform circular motion, Tangential and Radial acceleration	**Ch. 4** From **Serway**
Weeks 5, 6	Newton's laws of Motion: The concept of force, Newton?s First law, Newton?s Second law, The force of gravity and weight, Newton?s Third law, some applications of Newton?s law, forces of friction.	**Ch. 5** From **Serway**
Weeks 6, 7	Circular Motion and Other Applications of Newton?s Laws: Newton?s second law applied to uniform circular motion, nonuniform circular motion.	**Ch. 6** From **Serway**
Weeks 7, 8	Energy of a system: Work done by constant force, work done by varying force, kinetic energy and the work energy theorem, Potential energy of a system, conservative and nonconservative forces, conservative forces and potential energy	**Ch. 7** From **Serway**
Week 9	Conservation of Energy: conservation of mechanical energy, isolated and non isolated systems, work done by nonconservative forces, power	**Ch. 8** From **Serway**
Weeks 10, 11	Linear Momentum and Collisions: Linear momentum and its conservation, impulse and momentum, elastic and inelastic collisions in one dimension, two-dimensional collisions, the center of mass, motion of a system of particles	**Ch. 9** From **Serway**
Weeks 12, 13	Rotational Kinematics and Dynamics: Angular displacement, velocity and acceleration, rotational kinematics, angular and linear quantities, rotational energy, calculation of moments of inertia, torque, relationship between torque and angular acceleration, work, power, and energy in rotational motion, Rolling motion of a rigid object.	**Ch. 10** From **Serway**
Week 14	Rolling Motion and Angular Momentum: Rolling motion of rigid body, angular momentum of a particle, angular momentum of a rotating rigid body, conservation of angular momentum	**Ch. 11** From **Serway**

Week 15	Static Equilibrium and Elasticity: The condition of equilibrium of a rigid object, examples of rigid objects in static equilibrium.	**Ch. 12** From **Serway**
Week 16	Final exams starts	

Relationship to Program Student Outcomes (Out of 100%)										
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)

Dr. Serway is the coauthor of College Physics, Eleventh Edition; Principles of Physics, Fifth Edition; Essentials of College Physics; Modern Physics, Third Edition; and the high school textbook Physics, published by Holt McDougal. In addition, Dr. Serway has published more than 40 research papers in the field of condensed matter physics and has given more than 60 presentations at professional meetings.Â n writing this Tenth Edition of Physics for Scientists and Engineers, we continue our ongoing efforts to improve the clarity of presentation and include new pedagogical features that help support the learning and teaching processes. Physics and Measurement comprising the debt reaches across the cosmic gulf thousands of times. Similar calculations show that the bills could span the distance between the Earth and the Sun sixteen times. The strip could encircle the Earthâ€™s equator nearly 62 000 times. With successive turns wound edge to edge without overlapping, the dollars would cover a zone centered on the equator and about 4.2 km wide. P1.30. (a). To find the scale size of the nucleus, we multiply by the scaling factor âŽ›d âŽž dnucleus, scale = dnucleus, real âŽœ atom, scale âŽŸ âŽ datom, real âŽ âŽ› âŽž 300 ft = (2.40 Ã— 10â^'15 m) âŽœ New ListingPhysics for Scientists and Engineers: A Strategic Approach with Modern Physics b. Pre-Owned. 4.5 out of 5 stars. 3 product ratings - Physics for Scientists and Engineers: A Strategic Approach with Modern Physics b. C $105.86. Top Rated Seller. Top Rated Seller. PHYSICS for SCIENTISTS & ENGINEERS w ith M o d ern Physics D O U G L A S C. G I A N C O L I PEARSON Upper Saddle Riv Author: Douglas C. Giancoli. 11983 downloads 23653 Views 76MB Size Report.Â Giancoli, Douglas C. Physics for scientists and engineers with modern physics / Douglas C. Giancoli.â€"4th ed. p. cm. Includes bibliographical references and index. ISBN 0-13-149508-9 1. Physicsâ€"Textbooks. I. Title. QC21.3.G539 2008 530â€"dc22 2006039431. Physics for Scientists and Engineers with Modern Physics, Seventh Edition edition o Solutions manual to Tipler -Physics for Scientists and Engineers with Modern Physics(5th Edit). 2,958 PagesÂ·1990Â·23.49 MBÂ·7,862 DownloadsÂ·New! Solutions manual to Tipler -Physics for Scientists and Engineers with Modern Physics Physics : for scientists and engineers with modern physics. 1,379 PagesÂ·2005Â·111.19 MBÂ·6,816 DownloadsÂ·New! Physics : for scientists and engineers with modern physics Paul M Fishbane|Stephen Physics for Engineers and Scientists. 808 PagesÂ·2006Â·22.59 MBÂ·71,946 Downloads. Prefa

Physics for Scientists an has been added to your Cart. Add to Cart. Buy Now. Active in promoting effective physics education, he has received four National Science Foundation grants in physics education, and he helped found and direct the Southern California Area Modern Physics Institute (SCAMPI) and Science IMPACT (Institute for Modern Pedagogy and Creative Teaching). Dr. Jewett's honors include the Stockton Merit Award at Richard Stockton College in 1980, selection as Outstanding Professor at California State Polytechnic University for 1991-1992 and the Excellence in Undergraduate Physics Teaching Award from the American Association of Physics Teachers (AAPT) in 1998 Modern physics topics are often discussed within the framework of classical physics where appropriate. For scientists and engineers who are interested in learning physics. Year: 2014. KP_Physics for Scientists and Engineers with Modern Physics, 4th-2014_(Douglas C. Giancoli).pdf pages: 1435. 10 July 2019 (08:59). Post a Review. Physics is a description of reality, and thus each topic begins with concrete observations and experiences that students can directly relate to. We then move on to the generalizations and more formal treatment of the topic. Not only does this make the material more interesting and easier to understand, but it is closer to the way physics is actually practiced. 0136139221 / 9780136139225 Physics for Scientists and Engineers with Modern Physics and Mastering Physics. Package consists of: 0131495089 / 9780131495081 Physics for Scientists & Engineers with Modern Physics. 0131992260 / 9780131992269 Can you find your fundamental truth using Slader as a Physics for Scientists and Engineers with Modern Physics solutions manual? YES! Now is the time to redefine your true self using Slader's Physics for Scientists and Engineers with Modern Physics answers. Shed the societal and cultural narratives holding you back and let step-by-step Physics for Scientists and Engineers with Modern Physics textbook solutions reorient your old paradigms. NOW is the time to make today the first day of the rest of your life. Unlock your Physics for Scientists and Engineers with Modern Physics PDF (Profound Dyna By Maja Stanisavljev. Physics for Scientists Engineers Modern. By Chris Liu. digital fundamentals. By ì€ê²½ ì´. Physics for Scientists and Engineers.pdf.

Physics is a description of reality, and thus each topic begins with concrete observations and experiences that students can directly relate to. We then move on to the generalizations and more formal treatment of the topic. Not only does this make the material more interesting and easier to understand, but it is closer to the way physics is actually practiced. 0136139221 / 9780136139225 Physics for Scientists and Engineers with Modern Physics and Mastering Physics. Package consists of: 0131495089 / 9780131495081 Physics for Scientists & Engineers with Modern Physics. 0131992260 / 9780131992269 Achieve success in your physics course by making the most of what PHYSICS FOR SCIENTISTS AND ENGINEERS has to offer. From a host of in-text features to a range of outstanding technology resources, you'll have everything you need to understand the natural forces and principles of physics. Throughout every chapter, the authors have built in a wide range of examples, exercise Achieve success in your physics course by making the most of what PHYSICS FOR SCIENTISTS AND ENGINEERS has to offer. If you are a science or engineering university student and looking for a good Physics textbook, look no farther. After having a look at a few of them, this is in my opinion the best one available out there . flag Like · see review. for Scientists & Engineers & Modern Physics, 9th Ed Physics for Scientist Physics for Scientists and Engineers with Modern Physics. 1,584 Pages·2011·36.6 MB·13,914 Downloads·New! for Scientists and Engineers with Modern Physics Paul A. Tipler|Gene Mosca Physics for Engineers and Scientists. of Standards . Answers to Selected Odd-Numbered Problems A-45. Modern Physics for Scientists and Physics for Scientists and Engineers: Foundations and Connections, Extended Version with Modern. 1,576 Pages·2016·155.72 MB·4,580 Downloads·New! Physics for Scientists and Engineers: Foundations and Connections, Extended Version with Modern Physics for Scientists & Engineers & Modern Physics, 9th Ed. 8ed. , Brooks Cole, 2009. -1558 p. chapt. 1-46 (full text) In writing this eighth edition of Physics for Scientists and Engineers, we continue our ongoing efforts to improve the clarity of presentation and include new pedagogical features that help support the leaing and teaching processes. Drawing on positive feedback from users of the seventh edition, data gathered from both professors and students who use Enhanced WebAssign, as well as reviewers' suggestions, we have refined the text to better meet the needs of students and teachers.