



CAMPBELLSVILLE UNIVERSITY

COURSE SYLLABUS

PLEASE TYPE.

DATE September 26, 2016

ACADEMIC UNIT Natural Science FACULTY Steve Alston

Please check to indicate this course has a service learning component.

| Discipline | Course# Section | Title of Course | Credit Hours | Cross Reference (if applicable) |
|------------|--------------------|----------------------------|--------------|------------------------------------|
| PHY | 142-01 | General College Physics II | 3 | |

TEXTBOOK Required Not Required

Author R. Serway & C. Vuille Title College Physics, 10th Ed

Publisher _____ Date of Publication _____

WORKBOOK

Author _____ Title _____

Publisher _____ Date of Publication _____

PLEASE ANSWER THE FOLLOWING QUESTIONS ON A SEPARATE SHEET OF PAPER AND ATTACH TO THIS FORM.

- DESCRIPTION OF COURSE: Develop a brief description of the course as it will appear in the Catalog.
- STUDENT LEARNING OBJECTIVES: List the student learning objectives for the course. Please relate these objectives to the mission and goals of the University and the Academic Unit. For general education courses, please indicate which student learning objectives address general education goals and the intended method of assessment. A minimum of four of the seven general education goals must be included.

Example: Students will demonstrate their ability to compare and contrast two types of basket weaving. (Goal: Oral and Written Communication; Evidence: research paper and class presentation)

- COURSE OUTLINE: Outline the topics/units that are to be taught.
- EVALUATION: How do you plan to determine the grade in the course? Please include grading scale.
- REQUIREMENTS:
 - Examinations: State when tests are to be administered, including unit, mid-term, and final examinations.
 - Reports: How many, length required, and what type (Oral, term and/or research, book critiques).
 - Supplemental reading assignments or outside work required.
 - Supplemental instruction aids: Audio visual aids, field trips, guest speakers, etc.

6. BOOKLIST

DEAN Date Copy Received _____

VICE PRESIDENT FOR ACADEMIC AFFAIRS Date Copy Received _____

- Instructor:** Dr. Steve Alston, CH 302 or SSC 218A,
Ph. 270-789-(5250 or 5062), salston@campbellsville.edu
- Textbook:** *College Physics*, 10e, R. Serway and C. Vuille; problems online at WebAssign.net
- Attendance:** Required; recorded; 6 allowed absences; tardiness or early exit may be an absence
- Division of credit:** Online homework (20%), 3 exams (20% each), final comprehensive exam (20%),
make-up exams allowed *only with prior okay by instructor*
- Grading:** Grade based on overall numerical average: A (89+), B (78+), C (67+), D (56+)
- Academic dishonesty:** Any attempt to gain an unfair advantage during an exam will result in it being voided;
academic integrity matters follow the Natural Science Division's policy (online)
- Office hours:** MWF 9:00-10:00am, 1:00-2:00pm; TR 1:30-2:30pm; by appointment

Learning objectives:

- 1) To conceptually understand repeating motions, electromagnetism, optics and some modern physics;
- 2) To build an algebra-based, quantitative understanding of the above topics through numerical calculations;
- 3) To accumulate an introductory knowledge of the above topics, as demonstrated on exams;
- 4) To learn and practice problem-solving skills by writing solutions to problems on the above topics;
- 5) To develop an aesthetic appreciation of the natural world and rational explanations of it.

Campus Security can be reached anytime at 270-403-3611 (cell phone) for any security issues.

Title IX: Campbellsville University and its faculty are committed to assuring a safe and productive educational environment for all students. To meet this commitment and to comply with Title IX of the Education Amendments of 1972 with guidance from the Office for Civil Rights, CU requires all responsible employees, including faculty members, to report incidents of sexual misconduct that are shared by students to the University's Title IX Coordinator, Terry VanMeter (1 University Dr., UPO 944, Admin. Office 8A, 270-789-5016, twvanmeter@campbellsville.edu). Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at: www.campbellsville.edu/titleIX.

Disability Services: Campbellsville University is committed to providing reasonable accommodations for students who have documented physical or learning disabilities or medical or emotional conditions. A student with a documented disability or condition of this nature may be eligible for disability services. Documentation must be from a licensed professional and current in terms of assessment. Please contact the Coordinator of Disability Services (270-789-5192) to inquire about services.

Projected class coverage:

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|-----------------------|--|---------------------|------------------------------------|
| Wed., Aug. 31 | Motion that repeats (Ch.Sect: 13.1-4) | Wed., Oct. 19 | Inductance (20.6-7; 21.7) |
| Fri., Sept. 2 | Examples, damped motion (13.5-6) | Mon., Oct. 24 | Magnetic energy (20.8) |
| Wed., Sept. 7 | Concept of waves (13.7-9, 13.11) | Wed., Oct. 26 | AC circuits (21.1-6) |
| Fri., Sept. 9 | Sound waves (14.1-3) | Fri., Oct. 28 | EM Waves (21.8-10) |
| Mon., Sept. 12 | Intensity, Doppler Effect (14.4, 14.6) | Mon., Oct. 31 | Refraction I (22.1-4) |
| Wed., Sept. 14 | Wave interference (14.5, 14.7-11) | Wed., Nov. 2 | Exam 2 (Ch. 17-22) |
| Fri., Sept. 16 | Electric force (15.1-3, 7) | Fri., Nov. 4 | Refraction II (22.5-7) |
| Mon., Sept. 19 | Electric fields (15.4-6, 8) | Mon., Nov. 7 | Mirrors (23.1-3) |
| Wed., Sept. 21 | Gauss's Law (15.9) | Wed., Nov. 9 | Lenses I (23.4-6) |
| Fri., Sept. 23 | Electric potential (16.1-5) | Fri., Nov. 11 | Lenses II (23.7; 25.2-4) |
| Mon., Sept. 26 | Capacitance (16.6-7, 10) | Mon., Nov. 14 | Interference (24.1-3) |
| Wed., Sept. 28 | Capacitive circuits (16.8-9) | Wed., Nov. 16 | Diffraction (24.6-9; 25.6; 27.3-4) |
| Fri., Sept. 30 | Exam 1 (Ch. 13-16) | Fri., Nov. 18 | Relativity (26.1-4) |
| Mon., Oct. 3 | Current; resistance (17.1-4) | Mon., Nov. 21 | Mass-energy (26.5-6) |
| Wed., Oct. 5 | Electric power (17.5-8) | Mon., Nov. 28 | Bohr model (28.1-4) |
| Fri., Oct. 7 | Resistive circuits (18.1-8) | Wed., Nov. 30 | Atoms (28.5-7) |
| Mon., Oct. 10 | Magnetic fields (19.1-3, 7) | Fri., Dec. 2 | Nuclei; radioactivity (29.1-3) |
| Wed., Oct. 12 | Magnetic forces (19.4-6, 8) | Mon., Dec. 5 | Nuclear reactions (29.4-7) |
| Fri., Oct. 14 | Magnetic sources (19.9-10) | Wed., Dec. 7 | Exam 3 (Ch. 22-24, 26-29) |
| Mon., Oct. 17 | Faraday's Law (20.1-5) | Fri., Dec. 9 | Review |