Advanced Health Physics HPS-416 & 616

UNIVERSITY OF NEVADA LAS VEGAS Department of Health Physics and Diagnostic Sciences Spring 2022

Time: Class Location: Instructor: Office Location: Office Hours: Phone: Email:

Note: The instructor reserves the right to change the syllabus as it relates to how the course is administered.

Course Description

Problem-solving for radiation professionals focusing on problems pertaining to radiation safety in the environment, industry, medical facilities, and nuclear reactors. Serves as the capstone experience for the Health Physics majors. Instruction will include broad-breadth lectures and problem solving. Students will also perform radiation protection planning for facilities and projects.

Course Prerequisite(s):

HPS 300

Course Objectives

Solutions to problems pertaining to radiation safety in the environment, industry, medical facilities, and nuclear reactors. Topics include shielding, accelerators, radon, non-ionizing radiation, and radiation dose-effect.

Student Learning Outcomes

Students will be able to:

Explain radiation protection requirements in science and industry.

Become familiar with radiation protection challenges and solutions in the professional workplace, such as environmental projects, industry, medical facilities, and nuclear reactors.

Be able to solve radiation protection problems involving areas such as: shielding, accelerators, radon, non-ionizing radiation, and radiation dose-effect.

Required Text

Introduction to Health Physics, 4th Edition. Herman Cember, Thomas Johnson. McGraw Hill. 978-0-07-142308-3.

Recommended Text

National Council on Radiation Protection Report 127 NCRP. (1998) 0-929600-59-2.

Evaluation Methods

Grading for the course will - term project. Tentative grade weights given to each evaluation tool as follows:

Mini-Projects 30%

Final Exam 0%

Homework 25%

Term Project 25%

Assignment Policy

Homework will be due on the dates listed in the assignment, unless modified by the instructor. Late homework will be subject to a penalty of 10% per week late, unless approved by the instructor prior to due date. Homework submitted after solutions are posted will receive an additional 50% penalty.

Grading Scale

A 93 100
A- 90 94
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HPS 416 & 616 Syllabus

UNLV Policies

Public Health Directives

4 HPS 416 & 616 Syllabus Since the COVID-19 pandemic forced some instruction to be delivered remotely starting in Spring 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term. Recorded lectures must be stored securely, and are Records Retention Policy, meaning that the

recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted. Class recordings are protected from disclosure, as they are deemed part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

Copyright

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional <u>copyright policy</u> <u>information</u> is available at https://www.unlv.edu/provost/copyright.

Disability Resource Center (DRC)

The <u>UNLV Disability Resource Center</u> (Student Services Complex, SSC-A, Room 143, https://www.unlv.edu/drc, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to a permanent disability, temporary or permanent medical need, or academic support due to pregnancy are encouraged to contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. Students who are already registered with the DRC should request their accommodations online each semester, and make an appointment to discuss their accommodations with their instructors.

Final Examinations

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the <u>Final Exam Schedule</u>, https://www.unlv.edu/registrar/calendars.

Identity Verification in Online Courses

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas. 5 HPS 416 & 616 Syllabus UNLV students enrolled in online or hybrid courses are expected to read and adhere to the <u>Student Academic Misconduct Policy</u>, https://www.unlv.edu/studentconduct/misconduct/policy, which

Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the <u>Acceptable</u> <u>Use of Computing and Information Technology Resources Policy</u>,

https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades

fourths of course work for that semester/session, but cannot complete the last part of the course

believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate -, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed

complete the work, at the discretion of the instructor. If course requirements are not completed within the

adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the grade.

Library Resources

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the ______ website, https://guides.library.unlv.edu/appointments/librarian. You can also <u>ask the library staff</u> questions

academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the <u>ASC website</u>, https://www.unlv.edu/asc, or call 702-895-3177. The ASC is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center

One-on-one or small group assistance with writing is available free of ch(i)70 gnBT/F1 16 Tf1 0 0 1 72.025 596.

Week #	Lecture Topics	Reference	Notes
2	Review and Radiation Safety Guidelines	Cember Chapter 8	
3	Regulations and Radiation Protection Programs		
4	Regulations and Radiation Protection Programs		