

Hagerstown Community College
OFFICIAL MASTER SYLLABUS DOCUMENT

COURSE: BIO 202 – Radiation Biology

2 Credits

INSTRUCTOR: Megan Dayhoff

SEMESTER/YEAR: Fall 2018

COURSE DESCRIPTION:

This course focuses on the biological and genetic changes in the human body as the result of medical exposure to ionizing radiation. The therapeutic and diagnostic applications of ionizing radiation are also discussed. This course is required for students in the AAS Radiography Program. 45 hours of lecture. Prerequisites: PHY 106 and RAD 201 or instructor consent. Major topics include Cell Biology, Atomic Structure, Radioactivity, Effects of Radiation on Biological Material, Cellular Response to Radiation, Maximum Permissible Dose, and the concept of Risk Assessment.

TEXTBOOK:

Essentials of Radiation Biology and Protection, Second edition- Steve Forshier,
ISBN 10: 1-4283-1217-X

Reference Textbook:

Radiological Science for Student Technologists, ninth edition- Stuart C. Bushong
ISBN 10: 0323048378

STUDENT LEARNING OUTCOMES:

1. Identify the practice standards for radiation protection.
2. Modify the radiation exposure to decrease specific disease processes.
3. Apply the correct adjustment for technical changes.

ACCOUNTING FOR CREDIT HOUR REQUIREMENT

BIO 202-Radiation Biology

Face to Face Course

Assignment/Assessment

Clock Hours

Reading/studying for lecture exams	3 exams X 15 hours per exam=45
Reading/studying for quizzes	4 quizzes X 8 hours per quiz =32
Homework and reading	15 hours reading, completing assignments, taking note
One final assessment (comprehensive final)	15 hours
Total out of class time	107 hours

Total Hours of Coursework

To earn an academic credit at Hagerstown Community College, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute “academic” hours) of coursework per

semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of course work per credit.

For most classes, students should expect to do at least 2 (two) hours of coursework outside the class for each hour of in-class coursework.

SERVICES FOR STUDENTS WITH DISABILITIES: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.

