



NRE 4328 - Radiation Sources and Applications

Lecture: MW 2:00 – 3:15 am
Location: Boggs 3-28
Instructor: Dr. Steven Biegalski (steven.biegalski@me.gatech.edu)
Instructors Office: Boggs 3-44 office suite

Prerequisites: NRE 3112 Minimum Grade of D and NRE 3316 Minimum Grade of D

Course objectives: To familiarize students with the important concepts regarding radiation sources, radioisotope production, as well as application of radiation and radiation technologies in industry and medicine.

Text: None

Grade Distribution:

Project 1 Report	20%
Project 2 Report	20%
Project 3 Report	20%
Final Project Report	25%
Final Project Presentation	15%

Course Policies and Important Notes:

- **Project Reports (85% of grade)**

- There are three course projects and a final project.
- Projects are completed as a group.
- A single project report is submitted for each project for each group.
- Group feedback will be requested for each project. Individual grades may be adjusted (up or down) based on peer feedback.
- All reports are typed with all content (including graphs and figures) generated by computer.
- Reports are uploaded to Canvas.
- No late assignments will be accepted unless arranged with the instructor ahead of time.

- **Final Project Presentation (15% of grade)**

- Presentation should be approximately 45 minutes followed by questions and discussion.
- Grade based on content as well as oral communication skills.
- PPT file (or other format) must be uploaded to Canvas for grade.
- All labs must be typed and completed by computer.
- Lab reports are to be submitted via Canvas.
- No late assignments will be accepted unless arranged with the instructor ahead of time.

- **Grades**

Your final grade will be assigned as a letter grade according to the following scale:

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- F 0-59%

No curves should be anticipated for this course.

- **Attendance and Absences**

- Class attendance is expected.
- We may have a field trip (or two) and participation is strongly encouraged. Coordination with students for scheduling will be done.

Academic Honesty Policy Summary:

Introduction

Scholastic Dishonesty is any act designed to give an unfair academic advantage to a student, or the attempt to commit such an act. This includes copying from another student's exam; possessing or using unauthorized materials during an exam; using, buying, stealing, transporting or soliciting a test or the answer key; collaborating with another student during a test; copying someone else's homework or assignment; and permitting someone to take a test for you. The falsification of academic records is also an act of scholastic dishonesty. Students who participate in scholastic dishonesty will be reported and dealt with in accordance with Institute regulations. For information on the student's responsibility in meeting the specific Georgia Tech Honor Code, see Section 3 of the Honor Code at the following website:

<http://osi.gatech.edu/content/honor-code/>

Authorship

The student must clearly establish authorship of a work. Referenced work must be clearly documented, cited, and attributed, regardless of media or distribution. Even in the case of work licensed as public domain or Copyleft, (See: <http://creativecommons.org/>) the student must provide attribution of that work in order to uphold the standards of intent and authorship.

Collaboration & Group Work

All student projects and presentations are expected to be group efforts. At all times students are expected to follow the Academic Honor Code (<http://www.catalog.gatech.edu/policies/honor-code/>)

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

Late assignments will not be accepted and will not be rescheduled without an Institute approved absence (e.g. field trips and athletic events). Students with medical or family emergencies should contact the Dean of Students. See <http://catalog.gatech.edu/rules/4/> for an articulation of the Institute rules.

Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Student Use of Mobile Devices in the Classroom

Use of portable technology during class time is not permitted unless prior arrangement has been made with the course instructor. Please leave your laptop in your bag, turn off your cell phone, and resist the urge to text your mom.

Additional Course Policies

The materials used in this class, including, but not limited to, exams, quizzes, homework assignments, and lectures are copyright protected works. Any unauthorized copying of the class materials is a violation of federal law and may result in disciplinary actions being taken against the student. This includes, among other things, uploading class materials to websites for the purpose of sharing those materials with other current or future students.

Campus Resources for Students

Academic Advisors (advising.gatech.edu/) in each school help students navigate degree requirements and take advantage of campus resources to ensure their success.

The **Center for Academic Success** (success.gatech.edu/) offers a variety of academic support services to help students succeed academically at Georgia Tech (e.g. tutoring, peer-led study groups, study skills, etc.).

The **Communication Center** (communicationcenter.gatech.edu/) provides support for students with respect to developing competency and excellence in written, oral, visual, electronic, and nonverbal communication.

The **Library** (library.gatech.edu/) provides students with many services besides borrowing privileges including access to technology and technical assistance, online access to many journals and databases, and subject and personalized research assistance.

The **Office of Disability Services** (disabilityservices.gatech.edu/) ensures that students with disabilities have equal access to all programs and activities offered at Georgia Tech. They provide documentation

and officially sanctioned requests for accommodation for students

OMED: Educational Services (omed.gatech.edu/) is the unit charged by Georgia Tech with the retention, development, and performance of the complete student learner who is traditionally underrepresented: African American, Hispanic, and Native American. OMED’s programming and academic support services are aimed at equipping all students with strategies to navigate the Georgia Tech environment.

The **Division of Student Life** (studentlife.gatech.edu/) – often referred to as the Office of the Dean of Students – offers resources and support for all students in our community.

Counseling Center	counseling.gatech.edu/	404-894-2575
Dean of Students	studentlife.gatech.edu/	404-385-8772
GT Police	police.gatech.edu/	404-894-2500
Stamps Health Services	health.gatech.edu/	404-894-1420

Course Schedule

See associated course schedule. Note that the course schedule may change as we progress through the semester.

COVID-19 Related Expectations and Guidelines

Each of us has a responsibility to ourselves and our fellow Yellow Jackets to be mindful of our shared commitment. We will follow Georgia Tech guidelines as the semester progresses.

Class Recordings

This is an on-campus class. As a result, students are expected to show up to class. Some, but not all classes, may be recorded. If there is a class you need recorded due to an anticipated absence, please let the instructor know in advance.