

Purdue University
School of Nuclear Engineering
NUCL 300 – Nuclear Structure and Radiation Interactions

Instructor: Prof. Rusi Taleyarkhan
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Grader(tent.): Troy Barlow; Email: barlow12@purdue.edu

Schedule: Lectures (M-W-Fri; 10:30am – 11:20am; GRIS 134)
<https://purdue.webex.com/join/rusi>
Office Hours – Email/Appt. + Weekly Hour (TBD)

Prerequisites: NUCL200 or permission from instructor

Course Objectives: This course will acquaint students with the field of atomic/nuclear structure and photon/charge particle interactions with matter including concepts of radioactivity, and shielding. Practical engineering applications & skill-sets will be emphasized.

Texts/Handouts: by: 1) Knoll; 2) Jevremovic; 3) Lamarsh/Baratta; 4) Glasstone-Sesonske; 5) Mayo; 6) Tsoufinalidas, and Taleyarkhan et al. – See Course Syllabus /Topics List for Details (provided separately).

Grading:

Homework/Quizzes:	25%
Mid-Term Exam:	25% (8:00-9:30pm; BRWN 1154; 10/14/2021)
Final-Exam:	35%
Project:	15%
A+,A-:	85+; 81-85
B+,B, B-:	77-80; 74-76; 71-73
C+,C,C-:	67-70; 64-66; 61-63
D, E, F, I	as warranted
Class participation:	5% (instructor discretionary)

Notes: Late HW submissions: 20%/day reduction or prior approval from instructor. Failure to appear for Exam will result in 0% grade w/o prior approval from instructor; DRC arrangements are responsibility of students. Exams will cover material mainly from the in-class lectures, home works /handouts/quizzes. Attendance Policy (Lectures, Exams, Project). Project work will include your team presentations (mandatory attendance) in class. You are responsible for all material covered in the lectures. The best way to earn a high grade for this course is to attend lectures, take good notes, do your homework/quizzes and communicate with graders in timely manner (esp. for clarifying course grade issues) and the Professor (for concepts covered in class and to resolve situations with grades – if not with the grader/TA). Purdue's student honor code will be enforced as required.

** In case of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. You will be informed promptly via email or text alerts. Purdue's home-page for updates on emergencies, & emergency preparedness (shelter in place; fire-evacuation). In case of sickness or excused absence submit a physician's certificate or a letter from the Dean of Students, and obtain prior approval from the instructor for accommodations.**