

COLLEGE OF CHEMISTRY COURSE GUIDE (../INDEX.HTML)

MAJORS (../MAJOR.HTML) LIST OF COURSES (COURSES.HTML)

RESOURCES (../RESOURCES/RESOURCE.HTML)

STUDENT LIFE (../STUDENTLIFE/ORGS.HTML)

NUCE 130 - ANALYTICAL METHODS FOR NON- PROLIFERATION (3 UNITS)

(Taken from the UC Berkeley Course Guide (<http://guide.berkeley.edu>))

COURSE OVERVIEW

SUMMARY

Use of nuclear measurement techniques to detect clandestine movement and/or possession of nuclear materials by third parties. Nuclear detection, forensics, signatures, and active and passive interrogation methodologies will be explored. Techniques currently deployed for arms control and treaty verification will be discussed. Emphasis will be placed on common elements of detection technology from the viewpoint of resolution of threat signatures from false positives due to naturally occurring radioactive material. Topics include passive and active neutron signals, gamma ray detection, fission neutron multiplicity, and U and Pu isotopic identification and age determination.

PREREQUISITES

NUCE 101 ([nuce101.html](#)) or equivalent course in nuclear physics, or consent of instructor
Spring only

WORKLOAD

TIME COMMITMENT

3 hours of lecture per week.

Made by Angela Lee, c/o 2019



(<https://www.fsu.edu/college/online/graduate/curriculum/graduate-students/peer-advising>)