NUCE 155 - INTRODUCTION TO NUMERICAL SIMULATIONS IN RADIATION TRANSPORT (3 UNITS)

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

COURSE OVERVIEW

SUMMARY

Computational methods used to analyze radiation transport described by various differential, integral, and integro-differential equations. Numerical methods include finite difference, finite elements, discrete ordinates, and Monte Carlo. Examples from neutron and photon transport; numerical solutions of neutron/photon diffusion and transport equations. Monte Carlo simulations of photon and neutron transport. An overview of optimization techniques for solving the resulting discrete equations on vector and parallel computer systems.

PREREQUISITES

MATH 53 (math53.html) and MATH 54 (math54.html)

Spring only

WORKLOAD

TIME COMMITMENT

3 hours of lecture per week.

COLLEGE OF CHEMISTRY PEER SERVICES

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