



Graduate Certificate in Nuclear Criticality Safety Engineering



The UNLV **Graduate Certificate in Nuclear Criticality Safety Engineering** (NCSE), which was developed with the assistance of a U.S. NRC curricula development grant, is now available as a completely online graduate certificate program. The NCSE Certificate consists of three core nuclear engineering courses and one technical elective (12 credits). All of these courses may be used to meet UNLV graduate degree requirements. The three core courses are:

- *ME 754 Introduction to Nuclear Criticality Safety* – this course focuses on the basic theory of nuclear criticality safety. This course will be offered during fall semester 2013.
- *ME 755 Nuclear Criticality Safety Engineering* – this course builds upon ME 754, it includes more in-depth study of some of the topics therein in addition to new topics, and includes a tutorial of the MCNP radiation transport code. This course will be offered online during fall semester 2013 and spring semester 2014.
- *ME 756 Monte Carlo Methods in Nuclear Engineering* – in this course, students learn the theory of the Monte Carlo method (e.g., random numbers, sampling from probability distribution functions, variance reduction, etc.). They also learn its practical application in solving complex NCSE problems. It will be offered online during spring semester 2014.

Options for the elective course include, but are not limited to, the following:

- *ME 795 Special Topics – Probabilistic Risk Assessment (PRA)* – this course offers an introduction to the principles of risk analysis and will provide students hands-on experience in PRA methods. It will be offered online during spring semester 2014.
- *ME 791 Independent Study* – this course allows students to work directly with the instructor to select and perform a study and/or computational modeling of a NCSE-related topic of their choosing. It will be offered during fall semester 2013 and spring semester 2014.

Affordable non-resident tuition: UNLV offers reduced tuition for non-resident students who take these online courses (~\$1151 for each 3-credit graduate course, subject to change in the future).

For more information on **Nuclear Safety Engineering** education and research at UNLV and the **NCSE Graduate Certificate** program, click the poker chip 

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