Designated Emphasis in Nuclear Science (DENS) Criteria
Approved by Graduate Council: June 11, 2012

DENS Admission Criteria
Student must fill out the Application for DE Emphasis Form (http://www.gradstudies.ucdavis.edu/forms/GS323_DE_App.pdf), obtain the signature of the student’s Graduate Group Program Advisor and submit it to the Chair of the DENS for approval.

Summary of Graduate Programs in the DENS (chairs/faculty):

Biomedical Engineering (Chair: Kent Leach)
  Simon Cherry
  Jinyi Qi
  James Shackelford
  Julie Sutcliffe

Chemical Engineering/Materials Science and Engineering (Chairs: Ahmet Palazoglu/Roland Faller)
  Denise Krol
  Alexandra Navrotsky
  Subhash Risbud
  James Shackelford

Chemistry (Chair: Jacqueline Gervay-Hague)
  William Casey
  Alexandra Navrotsky

Geology (Chair: Magali Billen)
  Charles Lesher
  Alexandra Navrotsky
  Dawn Sumner

Physics (Chair: Andreas Albrecht)
  Barry Klein
  Robert Svoboda
  Mani Tripathi

McClellan Nuclear Research Center
  Manuel Lagunas-Solar
  Michael Lerche
Curriculum of the DENS:

Three 1-unit seminars: 1-unit seminar series to be offered each quarter; each student must take a total of three such seminars.

Two courses to be chosen from the following list:

Biomedical Engineering
- BIM243 (Radiation Detectors for Biomedical Applications)
- BIM252 (Computation Methods in Biomedical Imaging)
- BIM286 (Nuclear Imaging in Medicine and Biology)
- BIM287 (Concepts in Molecular Imaging)

Chemical Engineering/Materials Science and Engineering
- EMS251 (Applications of Solid State Nuclear Magnetic Resonance Spectroscopy)
- EMS289x (Nuclear Materials – proposed by S.H. Risbud)

Chemistry
- CHE240 (Advanced Analytical Chemistry)

Geology
- GEL227 (Stable Isotope Biogeochemistry)
- GEL251 (Advanced Topics in Isotope Geochemistry and Cosmochemistry)

Physics
- PHY224A (Nuclear Physics)
- PHY245A (High-Energy Physics)
- PHY250 (Special Topics in Physics: Neutrinos and Dark Matter)
- PHY252B (Techniques of Experimental Physics)

DENS Qualifying Exam and Dissertation Requirements

Student’s Qualifying Exam Committee and Dissertation Committee must each include at least one member DE. The Chair of DENS and the student’s PhD program Graduate Advisor must co-sign the Qualifying Exam Committee form, which is submitted to Graduate Studies for approval by the Dean of Graduate Studies. The student’s dissertation topic must be in a topic relevant to the DENS.