Academic Plan for Nuclear Engineering

(Minimum Requirements)

(MS Degree – Prerequisites Satisfied)

	FIRST FALL SEMESTER		Credits
ENU 5615	Radiation Detection & Instrumentation [(1)]		3
ENU 5615L	Radiation Detection & Instrumentation Lab [(1)]		1
ENU 6051	Radiation Interaction Basics & Applications I		3
ENU 6905	Supervised Research		1
ENU 6935	Graduate Colloquium		1
		Total:	9
	FIRST SPRING SEMESTER		
	Directed Elective[(2)]		3
	Directed Elective[(2)]		3
	Technical Elective[(2)]		3
		Total:	9
	FIRST SUMMER SEMESTER		
STA 6166	Statistical Methods in Research		3
	Thesis Research[(3)] / Technical Elective[(2)]		3
		Total:	6
	SECOND FALL SEMESTER		
	Directed Elective[(2)]		3
	Thesis Research[(3)] / Technical Elective[(2)]		3
		Total:	6
	Total Hours		30

Note: (1) Students having taken ENU 4612/4612L may substitute other Technical Electives
(2) Technical and Directed Electives must be approved by the academic / research advisor (see below)
(3) Students under the Thesis Option should register for Thesis Research (ENU 6971).

Directed Electives (Nuclear & Radiological Engineering)		Projected Offering
ENU 5142	Probabilistic Risk Assessment	Spring 2006, Spring 2007
ENU 5186	Nuclear Fuel Cycle	Fall 2005, Fall 2006
ENU 5516L	Nuclear Reactor Laboratory	Spring 2006, Spring 2007
ENU 5626	Radiation Biology	Fall 2005, Fall 2006
ENU 5658	Image Analysis with Medical Physics Applications	Fall 2006
ENU 6052	Particle Transport Methods and Applications	Spring 2006, Spring 2007
ENU 6106	Reactor Physics	Fall 2006
ENU 6126	Reactor Kinetics	Spring 2007
ENU 6623	Radiation Dosimetry	Spring 2006, Spring 2007
ENU 6937	Monte Carlo Methods	Fall 2005, Fall 2006
ENU 6937	Advanced Nuclear Thermal Hydraulics	Spring 2007

Directed Electives (Mechanical & Aerospace Engineering):

EML 5142	Two-Phase Flow and Boiling Heat Transfer
EML 5526	Finite Element Analysis and Applications
EML 6154	Conductive Heat Transfer
EML 6155	Convection Heat Transfer I
EML 6156	Multiphase Convection Heat Transfer
EML 6157	Radiation Heat Transfer
EML 6451	Energy Conversion

EAS 6135 Molecular Theory of Fluid Flows
EGM 5816 Intermediate Fluid Dynamics
EGM 6321 Principles of Engineering Analysis I
EGM 6322 Principles of Engineering Analysis II
EGM 6323 Principles of Engineering Analysis III
EGM 6341 Numerical Methods of Engineering Analysis I
EGM 6342 Numerical Methods of Engineering Analysis II
EGM 6812 Fluid Mechanics I
EGM 6813 Fluid Mechanics II
EGM 7819 Computational Fluid Dynamics

Directed Electives (Materials Science and Engineering):

EMA 5108 Vacuum Science and Technology
EMA 6001 Properties of Materials
EMA 6107 High Temperature Materials
EMA 6448 Ceramic Processing
EMA 6507C Scanning Electron Microscopy and Electron Probe Microanalysis