NE TECHNICAL ELECTIVES

Nuclear Engineering Technical Electives
NE
439 Intro to Radioactive Waste Management
468 Introduction to Space Nuclear Power
485 Fusion Technology
*499 Selected Topics

MEchanical Engineering Technical Electives
ME
306 Dynamics
400 Numerical Methods in Mechanical Engr.
404 Computational Mechanics
455 Engineering Project Management

Biology Technical Electives
BIOL
2110L Principles of Biology: Cellular and Molecular Lecture and Laboratory
2210L Human Anatomy & Physiology I
2305L Microbiology for Health Sciences

Chemistry Technical Electives
CHEM
2510 Quantitative Analysis Lecture & Lab
301 Organic Chemistry I
302 Organic Chemistry II
311 Physical Chemistry I
312 Physical Chemistry II
315 Intro to Physical Chemistry

EElectrical Engineering Technical Electives
ECE
2250 Intro to Control Systems
360 Electromagnetic Fields and Waves
381 Intro to Electric Power Systems
384 Electromechanical Energy Conversion

Math Technical Electives
MATH
311 Vector Analysis
312 PDEs for Engineers
314 Linear Algebra with Applications
356 Symbolic Logic
375 Intro to Numerical Computing
441 Probability

Physics Technical Electives
PHYS
301 Thermodynamics and Statistical Physics
302L Optics Lab
303 Analytical Mechanics I
304 Analytical Mechanics II
307 Electromagnetism

Civil Engineering Technical Electives
CE
302 Mechanics of Materials
335 Environmental & Water Resource Engr.
431 Physical-Chemical Water Treatment
433 Environmental Microbiology
436 Biological Wastewater Treatment
438 Sustainable Engineering
440 Design of Hydraulic Systems
441 Hydrogeology
442 Hydrogeologic Engr & Hydrology

Air Force Aerospace Studies
AFAS
300
400
401

Military Science and Leadership Technical Electives
MLSL
301 Adaptive Tactical leadership
303 Military History of the US
401 Developing Adaptive Leaders
402 Leadership in a Complex World

Naval Science
NVSC
300 Sea Power
303 Navigation
304 Naval Operations
331 Evolution of Warfare
401 Leadership and Management
407 Principles of Naval Leadership
431 Amphibious Warfare

The above courses are the ones that are most relevant to nuclear engineering that are readily available to undergraduates. For individual students wishing to specialize in an area, there may be additional courses that would be appropriate. However, the student must obtain prior approval from the NE advisor before taking any course not on this list.

For the highly qualified student, certain 500 level NE courses may be available in the senior year. To take these requires the consent of the NE advisor, the instructor of the course, the chairman of the department, and the dean of the college. The chairperson may allow up to 3 hours of technical electives for students taking required ROTC courses in aerospace or naval science. *NE 499 Nuclear Security topics are not available for credit for students enrolled in a NE degree program.