

NE TECHNICAL ELECTIVES (2 required)**NE**

353L Reactor Operations and Licensing (*spring - instructor permission required*)

439 Intro to Radioactive Waste Management (*fall*)

468 Introduction to Space Nuclear Power (*spring*)

485 Fusion Technology (*fall*)

499 Nuclear Criticality Safety (*fall*)

TECHNICAL ELECTIVES (1 required)**Chemical & Biological Engr Technical Electives**

CBE

427 Engineering Design for Global Health

472 Biomaterials Engineering

477 Electrochemical Engineering

486 Introduction to Statistics and Design of Experiments

499 Selected Topics

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

Electrical Engineering Technical Electives

ECE

300 Advanced Engineering Mathematics

314 Signals and Systems

321L Electronics I

345 Intro to Control Systems

360 Electromagnetic Fields and Waves

381 Intro to Electric Power Systems

384 Electromechanical Energy Conversion

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

Earth & Planetary Sciences Technical Electives

EPS

301 Mineralogy/Earth & Planetary Materials

333 Environmental Geology

352 Global Climate Change

365 Exploring the Solar System

405L Stable Isotope Geochemistry

410 Fundamentals of Geochemistry

415 Geochemistry of Natural Waters

Math Technical Electives

MATH

311 Vector Analysis

312 PDEs for Engineers

314 Linear Algebra with Applications

321 Linear Algebra

356 Symbolic Logic

375 Intro to Numerical Computing

441 Probability

Physics Technical Electives

PHYS

PHYS 2415 Computational Physics

301 Thermodynamics and Statistical Physics

302L Optics Lab

303 Analytical Mechanics I

304 Analytical Mechanics II

327 Geophysics

366 Mathematical Methods of Physics (4)

405 Electricity and Magnetism I

406 Electricity and Magnetism II

430 Introduction to Solid State Physics

450 Intro to Subatomic Physics

495 Theory of Special Relativity

Air Force Aerospace Studies

AFAS

300

400

401

Military Science and Leadership Technical Electives

MLS

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, and the graduate director of the department.

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.