GENERAL STUDIES REQUIREMENTS IN ENGINEERING
Minimum of 132 s.h. required for graduation (36 s.h. must be 300/400-level courses)
(Additional hours to total 132 s.h. - includes second major, minor, and elective hours.)

Name __________________________ I.D. # __________________________

General Studies Requirements (58-62 sh)

FIRST-YEAR CORE:

GST 110 - Global Experience (4 s.h.) __________________________
ENG 110 - Writing: Argument & Inquiry (4 s.h.) __________________________
MTH 112 or 121 or 212 (4 s.h.) *MTH 121 __________________________
HED 111 – Contemporary Wellness (2 s.h.) __________________________

Experiential Learning Requirement (ELR): (One Unit)

May be met by any one of the following: internship, practicum, co-op, study abroad, student teaching, approved field-based course or documented service, leadership, or individualized learning experience.

Foreign Language Requirement:

Students must meet one of the following: (a) complete a language course numbered 122 or higher at Elon, or receive transfer or study abroad credit for the same; (b) place into a language course numbered 200 or above upon arriving at Elon, using a department of foreign languages approved placement instrument; (c) score a 4 or better on an AP language exam or similar exam. Each student must take the language placement test by October 1 of his or her first full year at Elon. Students are allowed two tries; the higher score is counted. That score stands and may not be repeated by later testing.

STUDIES IN THE ARTS AND SCIENCES:

[Transfer students with at least 18 s.h. of transfer credit must complete 32 hours total in Studies in the Arts & Sciences, but may have as few as 7 hours in one or more of the four Studies in the Arts & Sciences areas.]

Expression __________________________ (8 s.h.) __________________________

[Eight hours chosen from at least two of the following: literature (in English or foreign languages), philosophy, & fine arts (art, art history, dance, fine arts, music, music theatre, & theatre arts). At least one course must be literature.]

Civilization __________________________ (8 s.h.) __________________________

[Eight hours chosen from at least two of the following: history, foreign languages, and religious studies.]

Society __________________________ (8 s.h.) __________________________

[Eight hours chosen from at least two of the following: economics, geography, human service studies, political science, psychology, & sociology/anthropology.]

Science *CHM 111 (Lab: ______) *CHM 112 (8 s.h.) __________________________

[Eight hours chosen from one or more of the following: mathematics, science, and computer science (CSC designation). At least one course must be a physical or biological laboratory science.]

ADVANCED STUDIES (Must be outside major.)

*MTH __________________________ (8 s.h.) __________________________

[Eight hours of 300–400 level coursework outside the major field and chosen from areas under Studies in the Arts and Sciences.]

GST Interdisciplinary Seminar __________________________ (4 s.h.) __________________________

[300-400 level GST course; requires junior/senior status.]

*Required in major; may count in General Studies.

Major Requirements

A minimum of 70-82 s.h. depending upon concentration selected.

Core Requirements (54 s.h.):

_____ *CHM 111 (4) - General Chemistry I with Lab
_____ *CHM 112 (4) - General Chemistry II with Lab
_____ PHY 221 (4) & PHYL 221 – University Physics I
_____ PHY 222 (4) & PHYL 222 – University Physics II
_____ *MTH 121 (4) - Calculus I
_____ MTH 221 (4) - Calculus II
_____ MTH 321 (4) – Multivariable Calculus and Analytic Geometry
_____ MTH 421 (4) - Differential Equations
_____ CSC 130 (4) – Computer Science I
_____ EGR 103 (4) – Challenges in Engineering
_____ EGR 206 (3) - Engineering Mechanics - Statics
_____ EGR 208 (3) - Engineering Mechanics – Dynamics

Select two (8 s.h.) of the following:

EGR 211 (3) & 212 (1) - Circuit Analysis/ Lab
EGR 306 (4) – Mechanics of Solids
EGR/PHY 310 (4) - Engineering Thermodynamics

(…Additional requirements for Engineering are continued on back…..)
Select one (1) of the following six (6) options

**B.S. in Engineering Physics (16 s.h.):**

- PHY 314 (4) - Modern Physics
- PHY 401 (4) - Classical Mechanics
- OR-
- PHY 403 (4) - Electrodynamics I
- PHY 397-98 (4) – Research Methods I and II
- Select 4 s.h. of PHY at the 300-400 level (excluding PHY 305)

**B.S. in Engineering Mathematics (24 s.h.)**

- MTH 265 (4) – Applied Mathematical Modeling
- MTH 341 (4) - Probability Theory and Statistics
- MTH 415 (4) - Numerical Analysis
- CSC 230 (4) – Computer Science II

Choose from one of the following options:

- MTH 206 (4) – Discrete Structures
- MTH 306 (4) – Applied Matrix Theory
- MTH 231 (4) – Mathematical Reasoning
- MTH 311 (4) - Linear Algebra

**B.S. in Computer Science/Engineering (24 s.h.)**

- MTH 206 (4) – Discrete Structures
- OR-
- MTH 231 (4) – Mathematical Reasoning
- CSC 230 (4) – Computer Science II
- CSC 330 (4) – Computer Science III
- CSC 331 (4) - Algorithm Analysis
- CSC 342 (4) - Computer Systems
- CSC 442 (4) – Mobile Computing

**B.S. in Chemistry/Chemical Engineering (23 s.h.)**

- CHM 211 (4) - Organic Chemistry I with Lab
- CHM 212 (4) - Organic Chemistry II with Lab
- CHM 311 (4) - Quantitative Analysis
- CHM 332 (4) - Physical Chemistry I
- CHM 341 (4) - Inorganic Chemistry I

^CHE 450 – Chemical Engineering Design I
^CHE 451 – Chemical Engineering Design II

^Taken at engineering school

**B.S. in Environmental Science/Environmental Engineering (18-28 s.h.)**

- ENS 111/113 (4) – Intro to Environmental Science w/ Lab
- ENS 200 (4) – Strategies for Environmental Inquiry
- CHM 211 (4) – Organic Chemistry I w/Lab
- MTH 341 (4) – Probability and Statistics

Ecological Processes (select one)

- BIO 215 (4) – Diversity of Life
- BIO 335 (4) – Field Biology
- ENS 320 (4) – Restoration Ecology
- ENS 330 (4) – Wildlife Ecology

Social Sciences and Humanities (select two)

- POL 224 (4) – Environmental Policy and Law
- POL 322 (4) – State Environmental Policy and Administration
- POL 344 (4) – International Environmental Policy
- SOC 334 (4) – Environmental Sociology
- ENG 318 (4) – Science Writing
- ENG 339 (4) – American Environmental Writers
- COM 331 (4) – Environmental Communications
- ART 339 (4) – Ecological Art
- GIS 250* (4) - Introduction to Geographical Systems
- POL 228* (4) - U.S. Environmental Law and Politics
- POL 344* (4) - Global Environmental Politics

*(or affiliate school equivalent)

**B.S. in Bio-physics / Biomedical Engineering (24 s.h.)**

- BIO 111/113 (4) – Introductory Cell Biology and lab
- BIO 261 (4) – Human Anatomy
- BIO 262 (4) – Human Physiology
- PHY 314 (4) – Modern Physics
- PHY 403 (4) – Electrodynamics I
- PHY 397-98 (4) – Research Methods I and II

**Major Total**