Elon Core Curriculum (56-60 s.h)

FIRST-YEAR FOUNDATIONS:
- COR 110 - Global Experience (4 s.h.)
- ENG 110 - Writing: Argument & Inquiry (4 s.h.)
- MTH 110 or 151 or 220 (4 s.h.) *MTH 151

Experiential Learning Requirement (ELR – 2 units required):
Included in experiential learning are study abroad, research, service-learning, leadership, internships, (including co-ops, teaching, and practicum), or other courses or experiences with ELR designation.

World 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 world languages approved placement instrument; (c) score a 4 or 5 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. Consideration for Phi Beta Kappa membership requires completion of one intermediate world language course, placement beyond that level or equivalent proficiency.

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 world 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, world 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/Analysis *CHM 111 (Lab: __) *CHM 112 (8 s.h.)
Eight hours chosen from one or more of the following: mathematics/statistics, science, computer science and information science. At least one course must be a physical or biological laboratory science.

ADVANCED STUDIES (Must be outside major.)

*MTH 359 ___________________ (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.

COR Interdisciplinary Capstone Seminar ________(4 s.h.)
[300-400 level COR course; requires junior/senior status.]

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

Major 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 151 (4) - Calculus I
- _____MTH 251 (4) - Calculus II
- _____MTH 252 (4) – Multivariable Calculus and Analytic Geometry
- _____*MTH 359 (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.....)

*Required in major; may count in Elon Core Curriculum.
Select one (1) of the following six (6) options

B.S. in Engineering Physics (16 s.h.):
____ PHY 314 (4) - Modern Physics
____ PHY 397 (4) – Research Methods I
____ PHY 398 (4) - Research Methods II
____ PHY 401 (4) – Classical Mechanics
-OR-
____ PHY 403 (4) – Electrodynamics I
____ Select 4 s.h. of PHY at the 300-400 level

B.S. in Engineering Mathematics (24 s.h.)
____ MTH 243 (4) – Applied Mathematical Modeling
____ MTH 329/STS 341 (4) - Probability Theory and Statistics
____ MTH 445 (4) - Numerical Analysis
____ CSC 230 (4) – Computer Science II
Choose from one of the following options:
____ MTH 241 (4) – Discrete Structures
____ MTH 349 (4) – Applied Matrix Theory
-OR-
____ MTH 330 (4) – Mathematical Reasoning
____ MTH 239 (4) - Linear Algebra

B.S. in Computer Science/Engineering (24 s.h.)
____ MTH 241 (4) – Discrete Structures
-OR-
____ MTH 330 (4) – Mathematical Reasoning
____ CSC 230 (4) – Computer Science II
____ CSC 303 (4) – Mobile Computing
____ CSC 330 (4) – Computer Science III
____ CSC 331 (4) - Algorithm Analysis
____ CSC 443 (4) - Computer Systems

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

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 329/STS 341 (4) – Probability Theory 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 245/246 (4) – Principles of Genetics and lab
____ BIO 261 (4) – Human Anatomy
____ BIO 262 (4) – Human Physiology
____ 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
____ Major Total

^Taken at engineering school