Elon Core Curriculum (56-60 sh)

**FIRST-YEAR FOUNDATIONS:**

COR 110 - Global Experience (4 s.h.)

ENG 110 - Writing: Argument & Inquiry (4 s.h.)

(C- or better required for graduation)

MTH 110 or 1251 or 220 (4 s.h.)*

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 languages approved placement. 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). 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** (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.)

(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.]

*Required in major; may count in Elon Core Curriculum.

**Major Requirements**

A minimum of 38-85 s.h. in the following courses is required.

*MTH 151 (4) - Calculus I

*MTH 251 (4) - Calculus II

*MTH 252 (4) - Multivariable Calculus & Analytic Geometry

Complete one of the following concentrations:

APPLIED MATHEMATICS (26-28 sh)

*MTH 241 (4) – Discrete Structures

*MTH 349 (4) – Applied Matrix Theory

Choose one from the following:

- MTH 220/STS 212 (4) – Statistics in Application
- MTH 243 (4) – Applied Mathematical Modeling
- MTH 329/STS 341 (4) – Probability and Statistics
- MTH 359 (4) – Differential Equations

*MTH 300/400-level course (4 sh., excluding MTH 308 & 309)

-OR-

Course from an allied field approved by the Mathematics Dept.

*CSC 130 (4) – Computer Science I

Math electives to total 12 sh. (May include one departmentally approved course from an allied field. At least 4 sh must be 400-level MTH course. Excludes MTH 110, 208, 209, 308 and 309)

---

PURE MATHEMATICS (26-28 sh)

*MTH 239 (4) – Linear Algebra

*MTH 330 (4) – Mathematical Reasoning

A related course from outside the mathematics department and approved by the mathematics department (such as: CSC 130 Computer Science I or PHY 201 General Physics I or PHY 221 University Physics)

Choose from the following:

- MTH/STS 460 (2) - Seminar I
- MTH 481 (2-4) Internship in Mathematics
- MTH 499 (2-4) Independent Research

(Concentration options are continued on page 2 …)
(… mathematics BA continued from page 1.)

**TEACHER LICENSIURE CONCENTRATION** (73 s.h.)

- MTH 220/STS 212 (4) – Statistics in Application
- MTH 239 (4) - Linear Algebra
- MTH 308 (4) – Math for Middle Grades & Secondary Teachers
- MTH 309 (1) – 21st Century Technology in Mathematics
- MTH 330 (4) - Mathematical Reasoning
- MTH 329 (4) - Probability Theory & Statistics
- MTH 335 (4) - Modern Geometry
- MTH 430 (4) - Abstract Algebra

Select one course from the following:

- *PHY 201 (4) – General Physics I*
- *CSC 130 (4) – Computer Science I*

**Professional Studies**

- *SOC 243 (4) – Sociology of Education*
- CIS 220 (3) – Technology for Teaching and Learning
- *PSY 321(4) - Educational Psychology*
- EDU 402 (1) – Explorations Capstone Seminar II for Middle Grades, K-12 and Secondary Majors
- EDU 315 (4) – Educational Assessment
- EDU 355 (4) – Teaching in 21st Century Classrooms
- EDU 422 (4) – Methods of Teaching Middle Grades and Secondary Math
- EDU 450 (4) – Teaching Diverse Learners in Secondary Schools
- EDU 481 (10) – Student Teaching
- EDU 403 (2) – Explorations Seminar III

---

**Major Comprehensive Evaluation**

All graduating mathematics majors are required to complete a senior portfolio of their work and exit interview based on portfolio materials. This portfolio will include a compilation of their work across their four years of mathematical study at Elon; therefore, students should be mindful of this requirement as they complete work for all their courses and be sure to retain electronic copies of work that they may want to include in their portfolio in their senior year.