2016-17 CHECKLIST FOR GRADUATION REQUIREMENTS IN APPLIED MATHEMATICS – BACHELOR OF SCIENCE

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. #_____________________

Elon Core Curriculum (56-60 sh)

FIRST-YEAR FOUNDATIONS:

COR 110 – Global Experience
(4 s.h.) _________

ENG 110 – Writing: Argument & Inquiry
(C- or better required for graduation)
(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, 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, art history 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, and public health studies 201 or 202.]

Science/Analysis
______________________________ (Lab: ___) *CSC 130 (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.

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Major Requirements

A minimum of 56 s.h. in the following courses is required.

- *MTH 151 (4) - Calculus I
- MTH 239 (4) – Linear Algebra
- MTH 251 (4) - Calculus II
- MTH 252 (4) – Multivariable Calculus & Analytic Geometry
- MTH 343 (4) – Mathematical Modeling
- MTH 359 (4) – Differential Equations

Select one courses from the following: 4 s.h.

- MTH 241 (4) – Discrete Structures
- MTH 330 (4) – Mathematical Reasoning

Students cannot count both MTH 241 and MTH 330 toward the major.

Select two courses from the following: 8 s.h.

(At least 4 s.h. must be at the 400 level)

- MTH 220/STS 212 (4) – Statistics in Application
- MTH 329/STS 341 (4) – Probability and Statistics
- MTH 445 (4) – Numerical Analysis
- MTH 471 (4) – Special Topics

Two 300/400 MTH classes (excluding MTH 308 and 309), or a sequence of two courses from an allied field approved by the mathematics department:

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*The electives and the related course from outside of mathematics are expected to form a cohesive plan and must be approved by the mathematics and statistics department.

Computer Science Requirements:

- CSC 130 (4) – Computer Science I
- One CSC course numbered 200 or above (4)

Choose from the following: A related experiential/capstone experience approved by the department (4 sh). Approved options are:

- MTH/STS 460 – Seminar I
- MTH/STS 461 (2) - Seminar I
- MTH 481 (1-4) Internship in Mathematics
- MTH 499 (1-4) Independent Research
- MTH 481 and 499 Combination

A student may be exempt from MTH 110 and/or MTH 151 by demonstrating proficiency.

Once a student has received credit, including transfer credit for a course, credit may not be received for any course with material that is equivalent to it or is a prerequisite for it without permission of the mathematics department.

All graduating mathematics majors are required to complete a senior portfolio of their work. 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.

______ Major Total (s.h.)