

**EAST CENTRAL UNIVERSITY  
MATHEMATICS - B.S.  
APPLIED MATHEMATICS/PRE-ACTUARY CONCENTRATION  
0294/UG14**

Advisor \_\_\_\_\_

Student's Name \_\_\_\_\_ ID No. \_\_\_\_\_

**DEGREE CHECK INCLUDES CURRENT ENROLLMENT**

Checked by \_\_\_\_\_ Date \_\_\_\_\_

**Required:**  
124 total hours \_\_\_\_\_ completed  
30 hrs @ ECU \_\_\_\_\_ completed  
(15 of last 30 must be at ECU) \_\_\_\_\_  
60 hrs @ Sr College \_\_\_\_\_ completed  
40 hrs upper level \_\_\_\_\_ completed  
HS Curricular Req \_\_\_ met \_\_\_ not met

Work in progress \_\_\_\_\_

**2.0 minimum required in the following areas:**  
ECU Avg \_\_\_\_\_ Rtn Avg \_\_\_\_\_  
Major Overall Avg \_\_\_\_\_  
Major ECU Avg \_\_\_\_\_  
Minor Overall Avg \_\_\_\_\_  
Minor ECU Avg \_\_\_\_\_

**Work lacking:**  
Major \_\_\_\_ (inc A/C and Related Work)  
Minor \_\_\_\_ (incl Rel Wk)  
Prof Educ \_\_\_\_\_  
General Educ \_\_\_\_\_  
Comp Prof \_\_\_ met \_\_\_ not met  
Serv Lrng \_\_\_ met \_\_\_ not met

**REQUIREMENTS**

**HOURS**

**I. General Education (45 HOURS)**  
12 hours (COMM 1113 or 2253, CMPSC 1113, ECON 2003, and MATH 1513) counted in the Major  
Other hours needed **33**

**II. Concentration in Applied Math/Pre-Actuary 46-52**

**A. Required General Education 0-3**

\_\_\_ MATH 1513 College Algebra

**B. Required Concentration 31-34**

- \_\_\_ MATH 1713 Trigonometry
- \_\_\_ MATH 2213 Intro to Probability and Statistics
- \_\_\_ MATH 2825 Calculus and Analytic Geometry I
- \_\_\_ MATH 3025 Calculus and Analytic Geometry II
- \_\_\_ MATH 3033 Calculus and Analytic Geometry III
- \_\_\_ MATH 3513 Mathematical Statistics
- \_\_\_ MATH 3583 Applied Statistics
- \_\_\_ MATH 3713 Linear Algebra
- \_\_\_ MATH 4113 Differential Equations
- \_\_\_ MATH 4923 Perspectives in Mathematics

**C. Required Electives 15**

- Two of the following:
- \_\_\_ CPSMA 3913 Discrete Mathematics
  - \_\_\_ CPSMA 3933 Operations Research
  - \_\_\_ CPSMA 4413 Numerical Methods
- Nine hours approved courses from MATH, CMPSC, MIS, MGMT, MKTG, BUSLW, or FIN (3000-4000)

**III. Related Work 30**

- A. Required General Education 9**
- \_\_\_ CMPSC 1113 Computer Programming I **OR**  
other computer programming course in a high level language (logical, functional, or procedural, including Mathematica).
  - \_\_\_ COMM 1113 Fundamentals of Human Comm **OR**  
\_\_\_ COMM 2253 Communication in the Workplace
  - \_\_\_ ECON 2003 Principles of Macroeconomics

**REQUIREMENTS**

**HOURS**

**B. Required Related Work 21**

- \_\_\_ ACCT 2103 Financial Accounting
- \_\_\_ ECON 2013 Principles of Microeconomics
- \_\_\_ ENG 3183 Technical and Professional Writing
- \_\_\_ FIN 3113 Financial Management
- \_\_\_ FIN 3913 Principles of Insurance and Risk Mgmt
- \_\_\_ MIS 1903 Computer Business Application
- \_\_\_ MIS 3433 Management Information Systems

**IV. Minor (Not Required)**

**V. Electives 9-15**

**VI. Total Hours Required 124**

**VII. Special Requirements**

MATH 1413, "teachers" or "methods" courses will not be counted in the major.

With departmental approval, students may omit MATH 1513 and MATH 1713 and begin with MATH 2825.

Actuaries must pass a series of exams administered by the Society of Actuaries (SOA) in order to achieve professional status as an actuary. The first exam, Exam P, covers probability and supporting calculus topics. Pre-actuary students should take this exam after completing MATH 3513 Mathematical Statistics. The second exam, Exam FM, covers interest theory and financial economics. This exam should be taken after FIN 3113 Financial Management. Other SOA exams cover subjects such as risk and risk management.

The OSRHE computer proficiency graduation requirement will be met through completion of CMPSC 1113 (including equated or substituted courses), or testing out of the challenge exam for this course, **OR** successful completion of an associate of arts or associate of science degree at an Oklahoma two-year college in which the computer skills requirement was met. Satisfaction of this requirement may not reduce or remove any program requirements.

Students beginning at East Central University in the fall 2007 semester or later who have earned less than sixty-four semester hours are required to take two classes with designated service-learning component. Students transferring to ECU for the first time in the fall 2007 semester or later with sixty-four or more semester hours will be required to take one class with a service-learning component.

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