

**EAST CENTRAL UNIVERSITY
MATHEMATICS - B.S.
DATA SCIENCE APPLICATIONS CONCENTRATION
0295/UG22**

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 _____

Work lacking:

Major _____ (inc A/C and Related Work)

Minor _____ (incl Rel Wk)

Prof Educ _____

General Educ _____

Comp Prof ___met ___not met

REQUIREMENTS

HOURS

I. General Education (44 HOURS)

6 hours (CMPSC 1113 and MATH 1513) counted in the Major

Other hours needed **38**

II. Concentration in Mathematics

46-52

A. Required General Education

0-3

___ MATH 1513 College Algebra

B. Required Mathematics Core

22-25

___ MATH 1223 Intro to Probability and Statistics

___ MATH 1713 Trigonometry

___ MATH 2825 Calculus and Analytic Geometry I

___ MATH 3025 Calculus and Analytic Geometry II

___ MATH 3033 Calculus and Analytic Geometry III

___ MATH 3713 Linear Algebra

___ MATH 4923 Perspectives in Mathematics

C. Required for Concentration in Data Science

18

___ CPSMA 2103 Data Structures

___ CPSMA 3813 Data Mining

___ CPSMA 4313 Data Processing and Visualization

___ CPSMA 4513 Data Applications in Business

___ MATH 3513 Mathematical Statistics

___ MATH 3583 Applied Statistics

D. Required Electives

6

Two of the following:

___ CPSMA 3913 Discrete Mathematics

___ CPSMA 3933 Operations Research

___ CPSMA 4413 Numerical Methods

REQUIREMENTS

HOURS

III. Related Work

12

A. Required General Education

3

___ CMPSC 1113 Computer Programming I

B. Required Related Work

9

___ CMPSC 1133 Computer Programming II

___ CMPSC 3313 Advanced Computer Languages

___ CMPSC 4213 Data Base Design

IV. Minor (Not Required)

V. Electives

22-28

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.

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.