

East Central University  
 Mathematics- B.S.  
 Data Science Concentration  
 0295/UG22

Student Name: _____	Student ID # _____
30 hours at ECU completed	Advisor: _____
60 hours at Sr college completed	_____
40 hours upper level completed	_____
_____	OSRHE Computer Proficiency Requirement met

Requirements	Hours
<i>Courses highlighted in blue are general education courses.</i>	
<b>I. General Education</b>	<b>40</b>

*A maximum of 12 hours may be counted in both the major/related work and general education.*

<b>II. Major in Data Science Mathematics</b>	<b>46-52</b>
A. Required Mathematics Core	22-28
MATH 1513 College Algebra †	
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	
B. 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	
C. Required Mathematics Electives	6
Two of the following:	
CPSMA 3913 Discrete Mathematics	
CPSMA 3933 Operations Research	
CPSMA 4413 Numerical Methods	

Requirements	Hours
<b>III. Related Work</b>	<b>12</b>

CMPSC 1113	Computer Programming I
CMPSC 1133	Computer Programming II
CMPSC 3313	Advanced Computer Languages
CMPSC 4213	Data Base Design

**IV. Minor**  
Not Required

**V. Electives** **22-31**

An elective course is any college-level course not required by the degree that is utilized to reach the 120 credit hours required for degree completion. Elective courses are chosen according to the interest of the student and can be used in completion of a minor, certificate, or additional major.

**VI. Total Hours Required** **120**

**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.