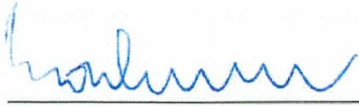# CURRICULUM CHANGE PROPOSAL

APPROVAL PAGE

Proposal Title: Change of Statistics to Data Science minor in Mathematical Sciences

College: Science   Department: Mathematical Sciences

DEPARTMENT CHAIR

I have read the enclosed proposal and approve this proposal on behalf of the department.

_____   12/12/19
Signature   Date

COLLEGE CURRICULUM COMMITTEE CHAIR

I have read the enclosed documents and approve the proposal on behalf of the college curriculum committee.

_____   1/30/20
Signature   Date

COLLEGE DEAN

I have read the enclosed documents and approve the proposal on behalf of the college. I certify that the necessary funds will be allocated by the college in support of this proposal.

_____   1/30/20
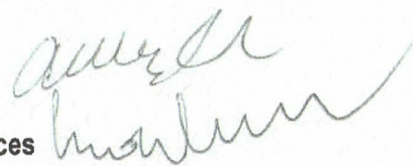Signature   Date

UNDERGRADUATE CURRICULUM CHANGE MEMO

Date: 10/11/2019

From: Amy Wagler, Department of Mathematical Sciences

Through: Christina Mariani, Department of Mathematical Sciences

Through: Robert A. Kirken, College of Science

To: Carla Ellis, Chair of UGCC

Proposal Title: Change of statistics to data science minor in Mathematical Sciences

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Throughout the nation, data science professionals are a needed asset for supporting the high-tech industry and existing major players in government, utilities and banking. Data scientists are essential for organizations wishing to make use of data for informing change in their organization. Similarly, in the state of Texas, there is a growing demand for data science professionals. Data scientists are essential in a variety of fields, such as banking, finance, health care, security, and other fields.

The existing minor in statistics would train a degree seeker from any field in the essentials of statistical modeling and analysis. However, in order to meet this industry demand, we proposed changes to the minor which include the following:

1) Change the minor name from statistics to data science. This will attract a greater variety of students who want to develop data analytic skills.

2) Allow for multiple pathways for the minor that allows flexibility for students of varying background, interests and goals. This minor revision allows students to choose from a set of relevant courses, rather than routing all students into the same set of courses.

3) Provide courses in statistical programming and data mining to undergraduates. This revised minor will allow students to take (optionally) newly offered senior level classes in statistical programming and data mining. These are in high demand at the undergraduate level and we have piloted the programming course with undergraduates.

Minor in ~~Statistics~~ Data Science

Return to:

Degree Plan

Code	Title	Hours
Required Courses:		
~~CS 1320~~ UNIV 1301	Computer Programming Sci/Engr	3
Math Electives:		
MATH 1411	Calculus I	3-4
or MATH 2301	Math for Social Sciences II	
Minor Electives:		
Select twelve hours from the following (6 hrs in upper division courses):		12
~~MATH 4370~~ CIS 1301 & 1101	Topics Seminar	
STAT 2480	Elementary Statistical Methods	
STAT 3330 OR STAT 3320	Probability	
STAT 4380	Statistics I	
STAT 4385	Applied Regression Analysis	
STAT 4474		
STAT 4329		
Total Hours		**18-19**