Date Submitted: 09/28/21 8:16 am

Viewing: **STANMS-STAT : Statistics and Analytics: Statistics Concentration**

Last approved: 02/18/21 9:50 am

Last edit: 09/30/21 2:55 pm

Changes proposed by: jgiganti

Catalog Pages Using
this Program
  Statistics and Analytics (STAN)

Submitter: **7332** ~~7456~~	User ID:	**jgiganti** ~~lkulcza~~	Phone:

Program Status   Active

Academic Level   Graduate

Type of proposal   Concentration

Select a reason for this modification
Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding/changing Focused Study or Track)

Effective Catalog Year   Fall 2022

College/School Code
  Graduate School and International Education (GRAD)

Department Code
  Statistics and Analytics (STAN) ~~Department of Graduate Dean (GRSD)~~

Program Code   STANMS-STAT

Degree   Master of Science

CIP Code

In Workflow

1. **GRAD Dean Initial**
2. **GRAD Dean Initial**
3. **Director of Curriculum Review and Program Assessment**
4. **Registrar Initial**
5. **Institutional Research**
6. **STAN Chair**
7. **ARSC Dean**
8. **AFLS Dean**
9. **EDUC Dean**
10. **ENGR Dean**
11. **GRAD Dean**
12. **WCOB Dean**
13. **Global Campus**
14. **Provost Review**
15. **University Course and Program Committee**
16. Graduate Council
17. Faculty Senate
18. Provost Final
19. Registrar Final
20. Catalog Editor Final

Approval Path

1. 09/28/21 8:17 am Jim Gigantino (jgiganti): Approved for GRAD Dean Initial
2. 09/28/21 8:17 am Jim Gigantino (jgiganti): Approved

for GRAD Dean
Initial

3. 09/29/21 5:35 pm
   Alice Griffin
   (agriffin): Approved
   for Director of
   Curriculum Review
   and Program
   Assessment

4. 09/30/21 2:56 pm
   Lisa Kulczak
   (lkulcza): Approved
   for Registrar Initial

5. 09/30/21 3:06 pm
   Doug Miles
   (dmiles): Approved
   for Institutional
   Research

6. 09/30/21 3:13 pm
   Jim Gigantino
   (jgiganti): Approved
   for STAN Chair

7. 09/30/21 3:17 pm
   Jeannie Hulen
   (jhulen): Approved
   for ARSC Dean

8. 09/30/21 3:47 pm
   Lona Robertson
   (ljrobert): Approved
   for AFLS Dean

9. 09/30/21 3:55 pm
   Matthew Ganio
   (msganio):
   Approved for EDUC
   Dean

10. 10/04/21 10:38 am
    Kevin Hall (kdhall):
    Approved for ENGR
    Dean

11. 10/04/21 1:27 pm Jim Gigantino (jgiganti): Approved for GRAD Dean

12. 10/04/21 1:46 pm Alan Ellstrand (aellstra): Approved for WCOB Dean

13. 10/04/21 2:03 pm Suzanne Kenner (skenner): Approved for Global Campus

14. 10/04/21 3:22 pm Ketevan Mamiseishvili (kmamisei): Approved for Provost Review

History

1. Oct 7, 2020 by Lisa Kulczak (lkulcza)
2. Feb 18, 2021 by Pat Koski (pkoski)

27.0501 - Statistics, General.

Program Title

Statistics and Analytics: Statistics Concentration

Program Delivery
Method

On Campus

~~Online/Web-based~~

Is this program interdisciplinary?

Yes

College(s)/School(s)

College/School Name
Bumpers College of Agricultural, Food, and Life Sciences (AFLS)
Fulbright College of Arts and Sciences (ARSC)

College/School Name
College of Education and Health Professions (EDUC)
College of Engineering (ENGR)
Graduate School (GRAD)
Walton College of Business (WCOB)

Does this proposal impact any courses from another College/School?

Yes

College(s)/School(s)

College/School Name
Fulbright College of Arts and Sciences (ARSC)

What are the total hours needed to complete the program?   30

Program Requirements and Description

Requirements

Requirements for Concentration in Statistics

Undergraduate Deficiencies

MATH 2564	Calculus II (ACTS Equivalency = MATH 2505)	
MATH 3083	Linear Algebra	
CSCE 2014	Programming Foundations II	

Core

Requirements include one course from each of these areas as approved by the student's advisory committee: 12

Statistical Methods, Regression Analysis, Multivariate Analysis, Experimental Design

Required Courses

STAT 5103	Introduction to Probability Theory	3
STAT 5113	Statistical Inference	3
STAT 5333	Analysis of Categorical Responses	3
STAT 5443	Computational Statistics	3

Choose one of the following options: 6

    6 hours of electives

    6 hours of thesis credit and submission of acceptable thesis

Written comprehensive exam (non-thesis) or defense of thesis

Total Hours   30

Are Similar Programs available in the area?

No

Estimated Student Demand for Program	24
Scheduled Program Review Date	2021

Program Goals and Objectives

Program Goals and Objectives
1. To provide and foster knowledge, practices and skills common to traditional first year graduate level programs in Statistics, Biological Analytics, Business Analytics, Operations Analytics, Computational Analytics, Quantitative Social Sciences, and Educational Statistics and Psychometrics.   2. To provide and foster knowledge, practices and skills from traditional advanced graduate level programs in one of the above disciplines.   3. To provide tools and experiences enabling our graduates to communicate effectively and work with practitioners in their field.   4. To provide highly skilled practitioners to industry and academic leadership positions in society.

Learning Outcomes

Learning Outcomes
1. Fundamental language of statistics (probability distributions, mean, variance, covariance, hypothesis testing, etc.)   2. Thorough knowledge of linear regression modeling and analysis.   3. Proficiency with regression in the context of many possibly collinear variables.   4. Thorough knowledge of the theory and design of statistical experiments.   5. Capability with software tools enabling general purpose statistical analysis.   6. Skill with programming tools and languages appropriate for one or more of the disciplines listed in Program Goals 1.   7. Ability to prepare and present statistical analyses.   8. Ability to communicate and collaborate effectively in both discipline specific and interdisciplinary team projects.

Description and justification of the request

Description of specific change	**Justification for this change**

Description of specific change	Justification for this change
Eliminating online delivery	This program was initially approved as an online program but that was in error. This program has never been offered online.

Upload attachments

Reviewer Comments

Lisa Kulczak (lkulcza) (09/30/21 2:55 pm): Adjusted department to correctly reflect STAN program; workflow updated to include STAN Chair vs. GRSD Chair.

Key: 797