

Date Submitted: 09/28/21 8:13 am

## Viewing: **STANMS-OPAN : Statistics and Analytics: Operations Analytics Concentration**

Last approved: 09/27/21 3:58 pm

Last edit: 09/30/21 2:51 pm

Changes proposed by: jgiganti

Catalog Pages Using  
this Program

[Statistics and Analytics \(STAN\)](#)

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

Program Status Active

Academic Level Graduate

Type of proposal Concentration

Select a reason for this modification

Making Minor Changes to an Existing Certificate or 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-OPAN

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. ENGR Dean
9. WCOB Dean
10. AFLS Dean
11. EDUC Dean
12. GRAD 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 5:36 pm  
Alice Griffin  
(agriffin): Approved  
for Director of  
Curriculum Review  
and Program  
Assessment
  4. 09/30/21 2:52 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. 10/04/21 10:38 am  
Kevin Hall (kdhall):  
Approved for ENGR  
Dean
  9. 10/04/21 1:46 pm  
Alan Ellstrand  
(aellstra): Approved  
for WCOB Dean
  10. 10/04/21 2:10 pm  
Lona Robertson  
(ljrobert): Approved  
for AFLS Dean
  11. 10/04/21 4:11 pm  
Matthew Ganio

(msganio):

Approved for EDUC  
Dean

12. 10/04/21 4:12 pm

Jim Gigantino

(jgiganti): Approved  
for GRAD Dean

13. 10/04/21 4:28 pm

Suzanne Kenner

(skenner): Approved  
for Global Campus

14. 10/04/21 4:36 pm

Ketevan

Mamiseishvili

(kmamisei):

Approved for  
Provost Review

15. 10/25/21 3:55 pm

Alice Griffin

(agriffin): Approved  
for University

Course and Program  
Committee

16. 11/19/21 9:47 am

Pat Koski (pkoski):

Approved for  
Graduate Council

## History

1. Sep 27, 2021 by Lisa Kulczak (lkulcza)

27.0501 - Statistics, General.

### Program Title

Statistics and Analytics: Operations Analytics 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)
College of Education and Health Professions (EDUC)
College of Engineering (ENGR)
Fulbright College of Arts and Sciences (ARSC)
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)
College of Engineering (ENGR)
Walton College of Business (WCOB)

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

## Program Requirements and Description

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Requirements

### Requirements for Concentration in Operations Analytics

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Undergraduate Deficiencies

- [MATH 2554](#) Calculus I (ACTS Equivalency = MATH 2405)
- [MATH 3083](#) Linear Algebra
- [STAT 3013](#) Introduction to Probability

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

[INEG 5613](#) Introduction to Optimization Theory 3

[INEG 5803](#) Simulation 3

One of the following: 3

[ISYS 5843](#) Seminar in Business Intelligence and Knowledge Management

[CSCE 5073](#) Data Mining

Choose one of the following options: 9

9 hours of electives

3 hours of electives, 6 hours of thesis credit and submission of an acceptable thesis

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

Total Hours 30

Are Similar Programs available in the area?

No

Estimated Student 24

Demand for Program

Scheduled Program 2021

Review Date

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**

### 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
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 2:51 pm):** Adjusted department to correctly reflect STAN program; workflow updated to include STAN Chair vs. GRSD Chair.

Key: 871