

Date Submitted: 09/28/21 8:15 am

Viewing: **STANMS-QNSS : Statistics and Analytics:  
Quantitative Social Science Concentration**

Last approved: 09/27/21 4:04 pm

Last edit: 09/30/21 2:53 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-QNSS

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. WCOB Dean
9. AFLS Dean
10. EDUC Dean
11. ENGR 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 2:55 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. 10/03/21 9:45 am  
Alan Ellstrand  
(aellstra): Approved  
for WCOB Dean
  9. 10/04/21 7:43 am  
Lona Robertson  
(ljrobert): Approved  
for AFLS Dean
  10. 10/04/21 9:55 am  
Matthew Ganio  
(msganio):  
Approved for EDUC  
Dean

11. 10/04/21 10:38 am  
Kevin Hall (kdhall):  
Approved for ENGR  
Dean
12. 10/04/21 1:27 pm  
Jim Gigantino  
(jgiganti): Approved  
for GRAD 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
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: Quantitative Social Science 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)
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 a Concentration in Quantitative Social Science

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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

<u>ISYS 5723</u>	Advanced Multivariate Analysis	3
<u>ECON 4753</u>	Forecasting	3
<u>ECON 5753</u>	Forecasting	3
<u>ECON 6623</u>	Econometrics II	3
<u>ECON 6633</u>	Econometrics III	3

Choose one of the following options: 6

6 hours of electives to include two of the following: cost benefit analysis; GIS and spatial analysis; multilevel modeling; social network analysis

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
1) Switching ECON 4753 with ECON 5753 2) Eliminating Online Delivery	1) Elimination of dual level courses--replace with new 5000-level course since dual level no longer available 2) 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

**Alice Griffin (agriffin) (09/29/21 5:36 pm):** ATTENTION: This minor request will require campus approval due to the changes including ECON.

**Lisa Kulczak (lkulcza) (09/30/21 2:53 pm):** Adjusted department to correctly reflect STAN program; workflow updated to include STAN Chair vs. GRSD Chair.

Key: 872