

Date Submitted: 10/11/20 2:27 pm

Viewing: **STANMS-EDSP : Statistics and Analytics:  
Educational Statistics and Psychometrics  
Concentration**

Last approved: 10/07/20 11:33 pm

Last edit: 10/12/20 4:12 pm

Changes proposed by: pkoski

Submitter: 7456      User ID: 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 2021

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

Department Code  
Department of Graduate Dean (GRSD)

Program Code      STANMS-EDSP

Degree      Master of Science

CIP Code

### In Workflow

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

### Approval Path

1. 10/11/20 2:28 pm  
Pat Koski (pkoski):  
Approved for GRAD  
Dean Initial

2. 10/11/20 2:29 pm  
Pat Koski (pkoski):  
Approved for GRAD  
Dean Initial
3. 10/12/20 3:16 pm  
Alice Griffin  
(agriffin): Approved  
for Director of  
Program  
Assessment and  
Review
4. 10/12/20 3:25 pm  
Lisa Kulczak  
(lkulcza): Approved  
for Registrar Initial
5. 10/12/20 4:04 pm  
Gary Gunderman  
(ggunderm):  
Approved for  
Institutional  
Research
6. 10/12/20 4:11 pm  
Pat Koski (pkoski):  
Approved for GRSD  
Chair
7. 10/12/20 4:43 pm  
Ketevan  
Mamiseishvili  
(kmamisei):  
Approved for EDUC  
Dean
8. 10/12/20 5:27 pm  
Norman Dennis  
(ndennis): Approved  
for ENGR Dean
9. 10/12/20 5:31 pm  
Jeannie Hulen  
(jhulen): Approved  
for ARSC Dean

10. 10/12/20 6:28 pm  
Pat Koski (pkoski):  
Approved for GRAD  
Dean
11. 10/12/20 8:01 pm  
Karen Boston  
(kboston):  
Approved for WCOB  
Dean
12. 10/13/20 10:12 am  
Lona Robertson  
(ljrobert): Approved  
for AFLS Dean
13. 10/13/20 10:21 am  
Suzanne Kenner  
(skenner): Approved  
for Global Campus
14. 10/13/20 10:43 am  
Terry Martin  
(tmartin): Approved  
for Provost Review
15. 10/23/20 5:17 pm  
Myrlinda Soedjede  
(myrlinda):  
Approved for  
University Course  
and Program  
Committee
16. 11/23/20 2:19 pm  
Pat Koski (pkoski):  
Approved for  
Graduate  
Committee

## History

1. Oct 7, 2020 by Lisa  
Kulczak (lkulcza)

27.0501 - **Statistics, General.** ~~27.0501~~

## Program Title

Statistics and Analytics: Educational Statistics and Psychometrics Concentration

## Program Delivery

## Method

On Campus

Online/Web-based

Is this program interdisciplinary?

**Yes** ~~No~~

College(s)/School(s)

College/School Name
<b>College of Education and Health Professions (EDUC)</b>
<b>College of Engineering (ENGR)</b>
<b>Fulbright College of Arts and Sciences (ARSC)</b>
<b>Graduate School (GRAD)</b>
<b>Walton College of Business (WCOB)</b>
<b>Bumpers College of Agricultural, Food, and Life Sciences (AFLS)</b>

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

Yes

College(s)/School(s)

College/School Name
<del>Bumpers College of Agricultural, Food, and Life Sciences (AFLS)</del>
<del>Fulbright College of Arts and Sciences (ARSC)</del>
College of Education and Health Professions (EDUC)
<del>College of Engineering (ENGR)</del>
<del>Graduate School and International Education (GRAD)</del>
<del>Walton College of Business (WCOB)</del>

What are the total hours needed to complete the program?

**30** ~~33~~

## On-line/Web-based Information

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Reason for offering

Web-based Program

Each concentration will have 6-12 graduates per year (enrollment of 12-24 students per concentration) until our resources grow to allow greater enrollment. These programs have a natural appeal for professionals currently working in industry that need the flexibility of online programs; they can't come to the campus consistently. The demand for these programs is expected to come from different areas across the state of Arkansas as well as the nation. The reputation of the University of Arkansas has also the potential to attract students from other countries that could get access online to the programs from their home countries.

Maximum Class Size 50  
for Web-based Courses

Course delivery mode	<b>Method(s)</b>
	Online

Class interaction mode	<b>Method(s):</b>
	Electronic Bulletin Boards

Percent Online  
100% with No Required Campus Component

Provide a List of Services Supplied by Consortia Partners or Outsourced Organization

All services are provided through the University of Arkansas. We have more than 30 online programs (including graduate, undergraduate as well as certificates) and have developed a strong infrastructure to support all services needed to deliver high quality online degree programs. Online proctoring is provided through Proctor U (which verifies identity and monitors students live while they take exams online –using web-cam and questionnaire to verify identity and live stream through webcam to monitor the exam as well as everything the student's computer is displaying). As described above, the Learning Management System used is Blackboard (which supports our online and on campus courses)

Estimate Costs of the Program over the First 3 Years      The costs of developing each of the courses is estimated to be around \$5,000 for

faculty compensation. No other additional cost is expected as the Global Campus infrastructure (already funded) provides instructional design, academic technology support, media support and training for faculty. The estimated maximum number courses that would need to be developed is 37. The total estimated cost of developing all remaining courses stands at \$185,000. The expenses for delivery are expected to materialize in the next three years. Currently the Global Campus dedicates \$250,000 a year for course development. Dedicating a fourth of these funds for the development of the courses outlined above is something that is already planned for in the budgeting of the Global Campus for the next three fiscal years.

List Courses Taught  
by Adjunct Faculty

Upload  
Memorandum of  
Understanding Forms  
(if required)

## Program Requirements and Description

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Requirements

### Requirements for Concentration in Educational Statistics and Psychometrics

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Undergraduate Deficiencies

[MATH 2554](#)      Calculus I (ACTS Equivalency = MATH 2405)

[MATH 3083](#)      Linear Algebra

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><a href="#">ESRM 5653</a></u>	<del>Educational Assessment</del>	<del>3</del>
<u><a href="#">ESRM 5013</a></u>	<b>Research Methods in Education</b>	<b>3</b>
<u><a href="#">ESRM 6653</a></u>	Measurement and Evaluation	3
<u><a href="#">ESRM 6753</a></u>	Item Response Theory	3
<u><a href="#">ESRM 699V</a></u>	<del>Seminar (as approved by the student's advisory committee)</del>	<del>3</del>

Choose one of the following options: 9

9 hours of electives as approved by the student's advisory committee

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 **2021-2022** ~~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**

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

<b>Description of specific change</b>	<b>Justification for this change</b>
Remove ESRM 5653 as a required course Add ESRM 5013 to required list Reduce number of hours of required courses from 12 to nine Reduce total numbers in concentration from 33 to 30	ESRM 5653 is no longer taught ESRM 5013 replaces ESRM 5653 Reduction of hours makes this concentration consistent with the other concentrations in the degree

Upload attachments

Reviewer Comments



**Alice Griffin (agriffin) (10/12/20 3:14 pm):** Revised scheduled program review date to reflect academic year, not calendar year.

**Alice Griffin (agriffin) (10/12/20 3:14 pm):** Changed total hours field to reflect description provided by submitter.