

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

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
College of Education and Health Professions (EDUC)

College/School Name
College of Engineering (ENGR)
Fulbright College of Arts and Sciences (ARSC)
Graduate School (GRAD)
Walton College of Business (WCOB)
Bumpers College of Agricultural, Food, and Life Sciences (AFLS)

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

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

What are the total hours needed to complete the program?

30 33

On-line/Web-based Information

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 for Web-based 50

Courses

Course delivery
mode

Method(s)
Online

Class interaction
mode

Method(s):
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

Requirements

Requirements for Concentration in Educational Statistics and Psychometrics

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

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 Demand for Program 24

Scheduled Program **2021-2022** ~~2021~~

Review Date

Program Goals and Objectives

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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
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.

