SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS
New Course Request

USD	**Arts & Sciences/Mathematical Sciences**
Institution	**Division/Department**
Elizabeth M. Freeburg	3/19/18
Institutional Approval Signature	**Date**

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
MATH/STAT 480/580	Applied Statistics	3

Course Description

This course applies core ideas in probability and statistics to the following topics: inference on population means and variances; Multiple Comparison; Categorical Data Analysis; Multiple Regression Model and General Linear Model; Basic Exploratory Data Analysis; R program Implementations.

Pre-requisites or Co-requisites (add lines as needed)

Prefix & No.	Course Title	Pre-Req/Co-Req?
STAT 281 or	Introduction to Statistics	Pre-Req
MATH/STAT 481/581	Probability and Statistics	Pre-Req

Registration Restrictions N/A

Section 2. Review of Course

2.1. Was the course first offered as an experimental course?

☐ Yes *(if yes, provide the course information below)* ☒ No

2.2. Will this be a unique or common course (*place an "X" in the appropriate box*)?

If the request is for a unique course, verify that you have reviewed the common course catalog via Colleague and the system Course Inventory Report to determine if a comparable common course already exists. List the two closest course matches in the common course catalog and provide a brief narrative explaining why the proposed course differs from those listed. If a search of the common course catalog determines an existing common course exists, complete the Authority to Offer an Existing Course Form.

☒ **Unique Course**

Prefix & No.	Course Title	Credits
STAT 485	Theory of Statistics I	3
STAT 481	Probability and Statistics	3

Provide explanation of differences between proposed course and existing system catalog courses below:

STAT 485 is a unique course that explores the following topics from a theoretical perspective: maximum likelihood estimators, interval estimators, tests of hypothesis, linear regression, distribution-free methods, and characteristic function distribution of random variables. STAT 481 introduces the core ideas in probability and statistics and is a prerequisite for this course.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

☒ **No**. Schedule Management, explain below: Redoing course offering rotation to optimize faculty resources as well as making sure we meet sufficient enrollment.

3.2. Existing program(s) in which course will be offered: Elective option for Statistics minor and Math major

3.3. Proposed instructional method by university: D-Discussion/Recitation

3.4. Proposed delivery method by university: 001-Face to Face

3.5. Term change will be effective (enter catalog year): Fall 2018

3.6. Can students repeat the course for additional credit?

☐ Yes, total credit limit: _____ ☒ No

3.7. Will grade for this course be limited to S/U (pass/fail)?

☐ Yes ☒ No

3.8. Will section enrollment be capped?

☒ Yes, max per section: 25 ☐ No

3.9. Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database in Colleague and the Course Inventory Report?

☐ Yes ☒ No

3.10. Is this prefix approved for your university?

☒ Yes ☐ No

Section 4. Department and Course Codes (Completed by University Academic Affairs)

4.1. University Department Code: UMATH

4.2. Proposed CIP Code: 27.0501

Is this a new CIP code for the university? ☐ Yes ☒ No

Thu 1/18/2018 5:10 PM

Cogswell, Kurt

RE: Stats Courses

To Van Peursem, Dan

You replied to this message on 1/18/2018 7:18 PM.

Hi Dan,

I suppose roaring is one way to describe it. I hope you're off to a good start there in the balmy south.

The course you describe doesn't match up with anything that we teach, so sounds like a new course to me! Whatever number isn't already in use is fine with me. Seems like STAT course numbers really should be random variables….

Kurt

From: Van Peursem, Dan [mailto:Dan.VanPeursem@usd.edu]
Sent: Thursday, January 18, 2018 2:49 PM
To: Cogswell, Kurt <Kurt.Cogswell@SDSTATE.EDU>
Subject: Stats Courses

Hi Kurt,

Hope you are off to a roaring start up north. I appreciate you turning up the thermostat a bit over last week. I know I had e-mailed you earlier and you had no issues with us offering your common courses STATS 445/545 Non-Parametric Stats or STATS 460/560 Time Series Analysis. The one other course we'd like to make permanent is a topics course we have been running the past several years and it had the following topics: Inference on population means and variances; Multiple Comparison; Categorical Data Analysis; Multiple Regression Model and General Linear Models; Basic Exploratory Data Analysis; R program Implementations. I don't think the topics match 100% of any currently offered course but I'm happy to use a current course if you recommend one. The other question would be if we create a new course on it, are there any numbers you are currently considering that I should shy from. Time for me to start actually filling out the paperwork☹

Thanks
Dan

	Course #	Title	Spr15	Fa15	Spr16	Fa16	Spr17	Fa17	Spr18	Fa18	Spr 19	Fa19	Spr 20	Fa 20	Spr 21	Fa 21	Spr 22	Fa 22
2	Math 216	Discrete Structures		1		1		1		1		1		1		1		1
4	Math 321	Differential	1		1		1		1		1		1		1		1	
5	Math 341	Concepts I	1	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1
6	Math 342	Concepts II	2	1	2	1	2	1	2	1	1	1	1	1	1	1	1	1
7	Math 351	Foundations	1		1		1		1		1		1		1		1	
8	Math 361	Geometry	1		1		1		1		1		1		1		1	
9	Math 411	Number Theory			1	Discontinued Course												
10	Math 412	Linear		1		1		1		1		1		1		1		1
11	Math 413	Abstract I		1		1		1		1		1		1		1		1
12	Math 414	Abstract II			1				1				1				1	
13	Math 416	Combinatorics				1				1				1				1
15	Math 421	Complex Analysis			1				Discontinued Course									
16	Math 423	Adv. CalcI		1		1		1		1			1		1		1	
17	Math 424	Adv. CalcII	1				1				1					1		
18	Math 432	PDE's		1				1	Discontinued Course									
20	Math 492	Topics in Applied Math											1				1	
21	STAT 445	Non-Parametric Stats										1				1		
22	STAT 460	Time Series Analysis									1				1			
23	Math 471	Num Anal I	1				1				1				1			
25	Math 475	OR						1				1				1		
27	Math 481	Prob and Stats				1				1				1				1
29	Math 488	Capstone		1			1		1		1		1		1		1	
35	STATS 486	Applied Statistics			1				1				1				1	
36	Math 713	Algebra I				1				1				1				1
37	Math 714	Algebra II	1				1				1				1			
38	Math 721	Complex Variables			1				1				1				1	
39	Math 723	Real Variables		1				1				1				1		
40	Math 724	Real Variables II			1				1				1				1	
41	Math 731	PDE's		1				1				1				1		
42	Math 735	Mathematical Modeling	1				1				1				1			
44	Math 761	Introduction to Topology				1				1				1				1
45										**10**	**11**	**9**	**12**	**9**	**11**	**10**	**12**	**9**
46											**total with calc**			14	15	15	16	14