COURSE CHANGE FORM

Complete 1a – 1f & 2a – 2c. Fill out the remainder of the form as applicable for items being changed.

1.	**General Information.**				
a.	Submitted by the College of:	Arts and Sciences	Today's Date:	4 October 2011	
b.	Department/Division:	Statistics			
c.	Is there a change in "ownership" of the course?		YES ☐	NO ☒	
	If YES, what college/department will offer the course instead?	_____			
d.	What type of change is being proposed?	☒ Major	☐ Minor[1] (place cursor here for minor change[OSC1] definition)		
e.	Contact Person Name:	Mark A. Gebert	Email:	mark.gebert@uky.edu	Phone: 257-6903
f.	Requested Effective Date:	☒ Semester Following Approval	OR	☐ Specific Term[2]: _____	
2.	**Designation and Description of Proposed Course.**				
a.	**Current Prefix and Number:**	STA 291	*Proposed Prefix & Number*:	*STA291*	
b.	**Full Title:**	Statistical Methods	*Proposed Title*:	*Statistical Methods*	
c.	**Current Transcript Title** (if full title is more than 40 characters):	_____			
c.	*Proposed Transcript Title (if full title is more than 40 characters)*:	_____			
d.	**Current Cross-listing:**	☒ N/A	OR	Currently[3] Cross-listed with (Prefix & Number): _____	
	Proposed – ☐ *ADD[3] Cross-listing (Prefix & Number):*	_____			
	Proposed – ☐ *REMOVE[3, 4] Cross-listing (Prefix & Number):*	_____			
e.	**Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours[5] for each meeting pattern type.**				
Current:	2 Lecture	_____ Laboratory[5]	1 Recitation	_____ Discussion	_____ Indep. Study
	_____ Clinical	_____ Colloquium	_____ Practicum	_____ Research	_____ Residency
	_____ Seminar	_____ Studio	_____ Other – Please explain:	_____	
Proposed:	*2 Lecture*	*_____ Laboratory*	*1 Recitation*	*_____ Discussion*	*_____ Indep. Study*
	_____ Clinical	*_____ Colloquium*	*_____ Practicum*	*_____ Research*	*_____ Residency*
	_____ Seminar	*_____ Studio*	*_____ Other – Please explain:*	*_____*	
f.	**Current Grading System:**	☒ Letter (A, B, C, etc.)	☐ Pass/Fail		
	Proposed Grading System:	☒ *Letter (A, B, C, etc.)*	☐ *Pass/Fail*		
g.	**Current number of credit hours:**	3	*Proposed number of credit hours:*	*3*	

[1] See comment description regarding minor course change. *Minor changes are sent directly from dean's office to Senate Council Chair*. If Chair deems the change as "not minor," the form will be sent to appropriate academic Council for normal processing and contact person is informed.
[2] Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
[3] Signature of the chair of the cross-listing department is required on the Signature Routing Log.
[4] Removing a cross-listing does not drop the other course – it merely unlinks the two courses.
[5] Generally, undergrad courses are developed such that one semester hr of credit represents 1 hr of classroom meeting per wk for a semester, exclusive of any lab meeting. Lab meeting generally represents at least two hrs per wk for a semester for 1 credit hour. (See *SR 5.2.1.*)

COURSE CHANGE FORM

h.	**Currently, is this course repeatable for additional credit?**		YES ☐	NO ☒
	Proposed to be repeatable for additional credit?		*YES* ☐	*NO* ☒
	If YES:	*Maximum number of credit hours:* _____		
	If YES:	*Will this course allow multiple registrations during the same semester?*	*YES* ☐	*NO* ☐
i.	**Current Course Description for Bulletin:**	Introduction to principles of statistics. Statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Theoretical distributions, statistical estimation, and hypothesis testing. Introduction to simple linear regression and correlation.		
	Proposed Course Description for Bulletin:	*Theoretical distributions, statistical estimation, and hypothesis testing. Introduction to simple linear regression and correlation. Introduction to categorical data analysis and ANOVA.*		
j.	**Current Prerequisites, if any:**	MA113, MA123, or equivalent		
	Proposed Prerequisites, if any:	_____		
k.	Current Distance Learning(DL) Status:	☐ N/A	☒ Already approved for DL*	☐ *Please Add*[6] ☐ *Please Drop*
	*If already approved for DL, the Distance Learning Form must also be submitted unless the department affirms (by checking this box ☒) that the proposed changes do not affect DL delivery.			
l.	**Current Supplementary Teaching Component, if any:**	☐ Community-Based Experience	☐ Service Learning	☐ Both
	Proposed Supplementary Teaching Component:	☐ *Community-Based Experience*	☐ *Service Learning*	☐ *Both*
3.	**Currently, is this course taught off campus?**		YES ☐	NO ☒
	Proposed to be taught off campus?		YES ☐	NO ☐
4.	**Are significant changes in content/teaching objectives of the course being proposed?**		YES ☒	NO ☐
	If YES, explain and offer brief rationale:			

Rationale for the changes to STA 291, Statistical Methods, were two-fold:

1. The material that is (in course description only) being removed from the course—basic graphical descriptive statistics, numerical descriptive statistics of center and spread—is material that is required of fifth, sixth, and seventh graders in the deconstructed standards of the Kentucky Department of Education (http://tiny.cc/v9p5q, see bottom illustrations), and once again in the fourth unit of algebra two in high school. The statistics department is not so naïve as to imagine that every teacher will have covered these topics, nor that every student, even having seen these, will have complete recall. That is why "in course description only" was used above—the topics formerly filling the first four weeks are relegated to two common "pre-homeworks", with optional online lecture videos, supplemental (no cost) tutoring from the online homework provider, and of course the students may actually come talk to their instructor or the course coordinator.

2. The College of Business and Economics, which teaches the course which follows STA 291, ECO 391, felt, first of all that they didn't know what was being taught in STA 291 and second of all that they were unable to get to some topics in statistics pertinent to their fields because time was being spent in ECO 391 covering material that STA 291 was not. When representatives from the respective colleges met, their goal was to work out an arrangement of topics that would result in maximum utility for the students given the time constraints (only two semesters to cover a great deal of material).

[6] You must *also* submit the Distance Learning Form in order for the course to be considered for DL delivery.

COURSE CHANGE FORM

5.	**Course Relationship to Program(s).**			
a.	**Are there other depts and/or pgms that could be affected by the proposed change?**		YES ☒	NO ☐
	If YES, identify the depts. and/or pgms: *College of Business and Economics*			
b.	**Will modifying this course result in a new requirement[7] for ANY program?**		YES ☐	NO ☒
	If YES[7], list the program(s) here: _____			
6.	**Information to be Placed on Syllabus.**			
a.	☐	Check box if changed to 400G or 500.	If changed to 400G- or 500-level course you must send in a syllabus and *you must include the differentiation* between undergraduate and graduate students by: (i) requiring additional assignments by the graduate students; and/or (ii) establishing different grading criteria in the course for graduate students. (See *SR 3.1.4*.)	

[7] In order to change a program, a program change form must also be submitted.

COURSE CHANGE FORM

Signature Routing Log

General Information:

Course Prefix and Number: STA 291 (course description)

Proposal Contact Person Name: Mark A. Gebert Phone: 257-6903 Email: mark.gebert@uky.edu

INSTRUCTIONS:
Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Statistics, Faculty	11/10/11	Mark Gebert / 7-6903 / mark.gebert@uky.edu	
Statistics, Chair	11/10/11	Arny Stromberg / 7-6115 / stromberg@uky.edu	
College of A&S	11/08/11	Anna Bosch / 7-6689 / bosch@uky.edu	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision[8]
Undergraduate Council	3/9/2012	Sharon Gill	
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

[8] Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

STA 291 Statistical Methods (on-line syllaus)

Instructor/ Facilitator: Dr. Mark A. Gebert
867 P.O.T.
mark.gebert@uky.edu
elearning.uky.edu (Blackboard)
Office Hours: MWF 11- 12, 2-3, & by appointment.

Lab Instructors: TBA
Instructor:
Contact preference, info (phone, office, email)

*Email is, easily, preferred method of contact. Emails sent during "regular business hours" (M – F, 8 – 5) will be answered that day unless I've announced special circumstances. This is also how any virtual (online or via phone) office hours will be conducted – should a problem, either with the material or administrative prove too involved to be solved via email, we (the instructor and the student) will find a mutually convenient time to communicate via online means or phone so that the problem is worked out to the student's satisfaction.

Text:

Sharpe, DeVeaux, and Velleman, *Business Statistics*, 2nd Ed, 2010.* bundled with MyLab access *

Course Description (Bulletin):

Theoretical distributions, statistical estimation, and hypothesis testing. Introduction to simple linear regression and correlation. Introduction to categorical data analysis and ANOVA. Prereq: MA 113, MA 123, or equivalent.

Minimum technology requirements:

Needed if you are going to avail yourself of the optional online lecture videos accessible on the U.K. Blackboard system and the online homework site, MyLab.

- In order to participate in this course, you will need access to a computer with the minimum hardware, software and internet configuration described at this site: : http://wiki.uky.edu/blackboard/Wiki%20Pages/Bb9%20Hardware%20and%20Software%20Requirements.aspx
- Students and faculty can download Microsoft Office Suite (including Word and PowerPoint) from this site: https://download.uky.edu/.
- If you experience technical difficulties with accessing course materials, the Customer Service Center may be able to assist you. You may reach them at 859-218-HELP (4357) or by e-mail at helpdesk@uky.edu. Please also inform the course instructor when you are having technical difficulties.
- The Teaching and Academic Support Center (TASC) website (http://www.uky.edu/TASC/) offers additional information and resources that can promote a successful learning experience. They may also be reached at 859-257-8272.

Additional requirements:

- Calculator ("2-variable statistics" on the package—the Texas Instruments' TI 30XII S, at around $15.99 is *perfectly acceptable*, all the way up to the TI 84+ for $114.95 or the Hewlett Packard HP48gII for $104.99)
- MyStatLab (for course homework, bundled with the physical copy of the textbook if purchased with any of the bookstores officially affiliated with the University of Kentucky—you'll have to explicitly check on this if not)—you will need this course ID: **lancaster61956**

Student Learning Outcomess:

Upon successful completion of this course, a student will be able to:

1. Given a real-world setting, decide the appropriate statistical analysis for the problem described.
2. Check the assumptions for the indicated statistical analysis.
3. Execute that elementary statistical procedure
4. Correctly interpret its results.

This mastery will be practiced and demonstrated using the assistance of computer software such as Excel which is generally available and applicable.

Course grading:

Your course grade will be calculated based on the following components (each of the components explained in full detail on the course's Blackboard web page):

In-class short-answer questions (need 30 index cards)	5%
Homework	15%
Instructor/TA guided Exercises ("Labs" or recitations)	15%
Common Exams (9/28 for 20%, 11/2 for 20%, and 12/15 for 25%)	65%

Grading scale: 90 – 100, A; 80– < 90, B; 70 -< 80, C; 60 – < 70, D; <60, E. A midterm grade based on all data available at that time will be posted on myUK by 21 October.

Homework is viewed and submitted in the MyLab online course software. No late work is accepted, on the homework or labs. In the case of a university-excused absence, grades will be "exempted" and not counted against the student. For exams, in the case of a university-excused absence, the student must inform the instructor on the first day of instruction he/she returns to schedule a make-up exam. Documentation must be provided.

Academic Integrity Policy

Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: http://www.uky.edu/Ombud. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of Student Rights and Responsibilities (available online) http://www.uky.edu/StudentAffairs/Code/part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).
Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

Student Services Available

- If you have a documented disability that requires academic accomodations in this course, please make your request to the University Disability Resource Center. The Center will require current disability documentation. When accomodations are approved, the Center will provide me with a Letter of Accomodation which details the recommended accomodations. Contact the Disability Resource Center, Jake Karnes, Director at 859.257.2754 or jkarnes@email.uky.edu.

Mid-term Grade (for 100-400 level courses, and for undergraduates in 500 level courses)

Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar (http://www.uky.edu/Registrar/AcademicCalendar.htm)

Excused Absences:

Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit "reasonable cause for nonattendance" by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

Verification of Absences

Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request "appropriate verification" when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Lecture Schedule (tentative):

Session	Contents	Book Sections (if any)		
Student is responsible for this material /these sections concurrent with first two weeks of class.	Introduction	1.1, 2.1, & 2.2	**Pre-HW1** (due 9/2)*	Lectures about these topics/ sections are available on this course's Blackboard site.
	Getting the Data	Chapter 3		
	Summarizing Categorical Data	Chapter 4		
	Probability	7.1 & 7.4		
	More Probability	7.5 & 7.6	**Pre-HW2** (due 9/9)	
	Summarizing Quantitative Data	5.1 & 5.2		
	Measures of Center	5.3		
	Measures of Spread	5.4 – 5.6		
1	Interpretations of the Standard Deviation	5.8, 5.9, 9.1		
2	Longitudinal Studies: Time for Two Variables	5.10 & 6.1 – 6.4		
3	Linear Regression	6.5 – 6.10		
4	Discrete Random Variables	8.1 & 8.2		
5	Binomial Probability Distribution	8.4		
6	Continuous Probability Distributions	9.2		
7	Sampling Distributions	10.1 – 10.4		
8	Bridge to Inference	none		
	Common Exam 1, 9/28 @ 5 p.m. (Location TBA) on material (including online) up to here.			
9	Estimation of the Population Proportion	11.1 – 11.4		
10	Estimation of the Population Mean	12.1, 12.2, & 12.3		
11	Hypothesis Testing	13.1 – 13.5		
12	Testing About the Proportion			
13	Testing About the Mean	13.6		
14	Diff. Between Two Means: Dependent Samples	14.7 & 14.8		
15	Diff. Between Two Means: Independent Samples	14.1 – 14.4		End of previous STA291 material
	Common Exam 2, 11/2 @ 5 p.m. (Location TBA) on material (including online) up to here.			
16	Two-Sample Problems w/Categorical Data	15.5		
17	Inf. w/Categ. Data: Tests of Homogeneity	15.1 – 15.4		
18	Inf: w/Categ. Data: Tests of Independence	15.6		
19	Significance of Regression	16.1 – 16.4		
20	Inference about the Mean versus Prediction of the Individual/Examination of Assumptions	16.6 & 16.7		
21	Linear Regression/Residual Analysis	Chap. 17		
22	Principles of Exp. Design	21.1 – 21.4		
23	One-Way Analysis of Variance—ANOVA	21.6 & 21.7		
	Common Final Exam: 12/15 @ 6 p.m. (Location TBA)			

*Due times are always end of day, 11:59 p.m., on the day announced—so you have that day to work on the homework, unless explicitly instructed otherwise.

Lab Schedule (tentative):

Lab Number	Lab Contents
1	T.A. Intro; Blackboard and CourseCompass/MyStatLab orientation
2	Binomial, Normal (some StatCrunch/Excel work/output)
3	Sampling distributions—what's so normal about the Normal, anyway?
4	Practice Exam 1
5	Confidence Interval Estimation in StatCrunch/Excel
6	"Is not!" "Is so!" "Is not!" "Is so" -- making a decision *rationally* using data
7	Hypothesis/Significance Testing in StatCrunch/Excel
8	Single-Sample Quantitative versus Qualitative Analysis/Hypothesis Testing
9	Practice Exam 2
10	Two-Sample Problem Recognition/Practice
11	Categorical versus Quantitative Data Analysis
12	CxC = C^2—Analysis of Contingency Tables Using the X^2
13	Linear Regression: CI versus PI— what exactly are we trying to predict?
14	Practice Final Exam