CGS Agenda Item: 13-71
Effective: Fall 2014

Eastern Illinois University

NEW/REVISED COURSE PROPOSAL FORMAT

(Approved by CAA on 9/29/11 and CGS on 10/18/11, Effective Fall 2011)

This format is to be used for all courses submitted to the Council on Academic Affairs and/or the Council on Graduate Studies.

Please check one: **_X_** New course **___** Revised course

PART I: CATALOG DESCRIPTION

1. **Course prefix and number, *such as ART 1000*:** HST 5800
2. **Title (*may not exceed 30 characters, including spaces*):** Statistical Analysis Hlth
3. **Long title, if any (*may not exceed 100 characters, including spaces*):** Statistical Analysis for Health Professionals
4. **Class hours per week, lab hours per week, and credit [*e.g., (3-0-3)*]:** 3-0-3
5. **Term(s) to be offered:** **_X_** Fall **_X_** Spring **_X_** Summer **___** On demand
6. **Initial term of offering:** **_X_** Fall **___** Spring **___** Summer **Year:** _2014___
7. **Course description:** This course is intended to introduce the student to the fundamental concepts of statistics, as well as, provide the student with reasoning skills that can be applied to statistical information that may be encountered on a daily basis in the health profession. Students should learn how to draw conclusions from analyses and also communicate analysis results.

8. **Registration restrictions:**
   a. **Equivalent Courses**
      - **Identify any equivalent courses** (e.g., cross-listed course, non-honors version of an honors course).

      This course is similar to other advanced statistics courses in any social science discipline. However, all assignments and discussions will be specific to the health field. As this course is required for the Masters' Program and prepares students for their thesis, we do not foresee any conflict of interest with other statistics courses across campus.

      - Indicate whether coding should be added to Banner to restrict students from registering for the equivalent course(s) of this course. **___** Yes **_X_** No

   b. **Prerequisite(s)**
      - **Identify the prerequisite(s),** including required test scores, courses, grades in courses, and technical skills. Indicate whether any prerequisite course(s) MAY be taken concurrently with the proposed/revised course.

        No prerequisite(s).

      - Indicate whether coding should be added to Banner to prevent students from registering for this course if they haven't successfully completed the prerequisite course(s). **___** Yes **_X_** No

        If yes, identify the minimum grade requirement and any equivalent courses for each prerequisite course:

c. Who can waive the prerequisite(s)?
_**X**_ No one ___ Chair ___ Instructor ___ Advisor ___ Other (Please specify)

d. Co-requisites (course(s) which MUST be taken concurrently with this one): None

e. Repeat status: _**X**_ Course may not be repeated.

___ Course may be repeated once with credit.

Please also specify the limit (if any) on hours which may be applied to a major or minor.

f. Degree, college, major(s), level, or class to which registration in the course is restricted, if any:
Any student admitted to the Graduate School

g. Degree, college, major(s), level, or class to be excluded from the course, if any:

9. Special course attributes [cultural diversity, general education (indicate component), honors, remedial, writing centered or writing intensive]
None.

10. Grading methods (check all that apply): _**X**_ Standard letter ___ CR/NC ___ Audit ___ ABC/NC
("Standard letter"—i.e., ABCDF--is assumed to be the default grading method unless the course description indicates otherwise.)

Please check any special grading provision that applies to this course:

___ The grade for this course will not count in a student's grade point average.

___ The credit for this course will not count in hours towards graduation.

If the student already has credit for or is registered in an equivalent or mutually exclusive course, check any that apply:

___ The grade for this course will be removed from the student's grade point average if he/she already has credit for or is registered in _____ (insert course prefix and number).

___ Credit hours for this course will be removed from a student's hours towards graduation if he/she already has credit for or is registered in _____ (insert course prefix and number).

11. Instructional delivery method: (Check all that apply.)

_**X**_ lecture ___ lab ___ lecture/lab combined ___ independent study/research
___ internship ___ performance ___ practicum or clinical ___ study abroad
_**X**_ Internet _**X**_ hybrid ___ other (Please specify)

PART II: ASSURANCE OF STUDENT LEARNING

1. List the student learning objectives of this course:

1. Gather and explore data as well as ask a statistical question.
2. Apply the concept of probability necessary to make the step from analyzing the data descriptively to analyzing the data inferentially.
3. Utilize descriptive and inferential statistical procedures using statistical software.
4. Form confidence intervals and conduct significance tests and then make appropriate conclusions answering the statistical question of interest.
5. Analyze associations and look at extended statistical methods.

a. If this is a general education course, indicate which objectives are designed to help students achieve one or more of the following goals of general education and university-wide assessment:

- **EIU graduates will write and speak effectively.**
- **EIU graduates will think critically.**
- **EIU graduates will function as responsible citizens.**

b. If this is a graduate-level course, indicate which objectives are designed to help students achieve established goals for learning at the graduate level:

- **Depth of content knowledge**
- **Effective critical thinking and problem solving**
- **Effective oral and written communication**
- **Advanced scholarship through research or creative activity**

Student Learning Outcomes: **As a result of completing this course, students will be able to:**	**Graduate Level Learning Goals**
Gather and explore data as well as ask a statistical question.	• Depth of content knowledge
Apply the concept of probability necessary to make the step from analyzing the data descriptively to analyzing the data inferentially.	• Depth of content knowledge • Effective critical thinking and problem solving
Utilize descriptive and inferential statistical procedures using statistical software.	• Depth of content knowledge • Effective critical thinking and problem solving
Form confidence intervals and conduct significance tests and then make appropriate conclusions answering the statistical question of interest.	• Depth of content knowledge • Effective oral and written communication
Analyze associations and look at extended statistical methods.	• Depth of content knowledge • Advanced scholarship through research or creative activity

2. Identify the assignments/activities the instructor will use to determine how well students attained the learning objectives:

	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5
Quizzes	X	X	X	X	X
Homework Assignments	X	X	X	X	X
Discussions	X	X	X	X	X

3. Explain how the instructor will determine students' grades for the course:

1. Quizzes 50%
2. Homework Assignments 25%
3. Discussions 25%

100 - 90% = A
89 - 80% = B
79 - 70% = C
< 70% = F

4. For technology-delivered and other nontraditional-delivered courses/sections, address the following:

a. Describe how the format/technology will be used to support and assess students' achievement of the specified learning objectives:

(1) All supplemental materials (PowerPoints, textbook ancillaries, etc.) will be provided through a Learning Management System (LMS), such as Desire2Learn.
(2) Links to current articles and other web resources pertinent to course material will be provided through the LMS.
(3) Online discussions will be conducted to explore greater detail and controversial aspects of course content.

b. Describe how the integrity of student work will be assured:

Exams in technology-delivered courses will be delivered within the currently available online LMS (currently, Desire2Learn). These systems typically allow instructors to control test availability, question delivery, etc., as well as providing tracking data about when students log in to the system to take a test. In many ways, this makes it easier to spot students who may be working together while taking the exam.

c. Describe provisions for and requirements of instructor-student and student-student interaction, including the kinds of technologies that will be used to support the interaction (e.g., e-mail, web-based discussions, computer conferences, etc.):

Instructor-student and student-student interaction will be facilitated mainly through discussion boards in online courses. Further communication will be available via email. Other messaging or conferencing technologies may be utilized, as necessary and as available with the LMS. Online office hours will be held using the LMS and other resources. Currently, several instructors utilize Google products such as Google Docs, Google Hangouts and Google Chat to facilitate communication. As online course delivery platforms continue to evolve, the new tools they make available to instructors will be utilized, as appropriate.

5. For courses numbered 4750-4999, specify additional or more stringent requirements for students enrolling for graduate credit. These include:

a. course objectives;

b. projects that require application and analysis of the course content; and
c. separate methods of evaluation for undergraduate and graduate students.

6. If applicable, indicate whether this course is writing-active, writing-intensive, or writing-centered, and describe how the course satisfies the criteria for the type of writing course identified. (See Appendix *.) N/A

PART III: OUTLINE OF THE COURSE

Provide a week-by-week outline of the course's content. Specify units of time (e.g., for a 3-0-3 course, 45 fifty-minute class periods over 15 weeks) for each major topic in the outline. Provide clear and sufficient details about content and procedures so that possible questions of overlap with other courses can be addressed. For technology-delivered or other nontraditional-delivered courses/sections, explain how the course content "units" are sufficiently equivalent to the traditional on-campus semester hour units of time described above.

Note: Table below assumes an additional 100 minutes of outside course work for every 50 minutes of allocated course time.

	Topic Covered	F2F time allotment	Hybrid Course	Online Course (expected time spent by student)
Week 1	Statistics: The Art and Science of Learning from Data	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 2	Exploring data with Graphs and Numerical Summaries	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 3	Association: Contingency, Correlation, and Regression	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 4	Gathering Data	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 5	Probability in Our Daily Lives	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 6	Probability Distributions	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 7	Sampling Distributions	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes

Week 8	Statistical Inference: Confidence Intervals	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 9	Statistical Inference: Significance Tests About Hypotheses	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 10	Comparing Two Groups	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 11	Analyzing the Association Between Categorical Variables	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 12	Analyzing the Association Between Quantitative Variables: Regression Analysis	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 13	Multiple Regression	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 14	Comparing Groups: Analysis of Variance Methods	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes
Week 15	Nonparametric Statistics	150 minutes	F2F: 75 minutes Online: discussion board (75 minutes)	Content review, reading: 75 minutes Web-based assignments: 75 minutes

PART IV: PURPOSE AND NEED

1. **Explain the department's rationale for developing and proposing the course.**

    a. **If this is a general education course, you also must indicate the segment of the general education program into which it will be placed, and describe how the course meets the requirements of that segment.**
    b. **If the course or some sections of the course may be technology delivered, explain why.**

    This course will be a required course in the new Department of Health Studies graduate program. Having multiple modalities allows us to better serve the needs of our graduate students.

2. **Justify the level of the course and any course prerequisites, co-requisites, or registration restrictions.** N/A
3. **If the course is similar to an existing course or courses, justify its development and offering.**

This course is not similar to any existing courses.

a. **If the contents substantially duplicate those of an existing course, the new proposal should be discussed with the appropriate chairpersons, deans, or curriculum committees and their responses noted in the proposal.**
b. **Cite course(s) to be deleted if the new course is approved. If no deletions are planned, note the exceptional need to be met or the curricular gap to be filled.**

4. **Impact on Program(s):**

   a. **For undergraduate programs, specify whether this course will be required for a major or minor or used as an approved elective.**
   b. **For graduate programs, specify whether this course will be a core requirement for all candidates in a degree or certificate program or an approved elective.**

   This course will be a required course for all candidates in the graduate program.

   If the proposed course changes a major, minor, or certificate program in or outside of the department, you must submit a separate proposal requesting that change along with the course proposal. Provide a copy of the existing program in the current catalog with the requested changes noted.

PART V: IMPLEMENTATION

1. **Faculty member(s) to whom the course may be assigned:** Dr. Misty Rhoads, Dr. Dejan Magoc or any member of the Health Studies faculty with the appropriate professional background and who has been approved for graduate teaching. Online sections maybe taught by faculty who have completed the online training for technology delivered courses at EIU.

   If this is a graduate course and the department does not currently offer a graduate program, it must document that it employs faculty qualified to teach graduate courses.

2. **Additional costs to students:** None.

   Include those for supplemental packets, hardware/software, or any other additional instructional, technical, or technological requirements. (Course fees must be approved by the President's Council.)

3. **Text and supplementary materials to be used (Include publication dates):**

   Agresti, A. (2013). Statistics: The Art and Science of Learning from Data (3rd ed.). Pearson Education, Inc., Boston, MA.

   Tagler, M.J. (2009). Understanding Basic Statistics with Spreadsheets. Pearson Custom Publishing.

PART VI: COMMUNITY COLLEGE TRANSFER

If the proposed course is a 1000- or 2000-level course, state either, "A community college course may be judged equivalent to this course" OR "A community college course will not be judged equivalent to this

course." A community college course will not be judged equivalent to a 3000- or 4000-level course but may be accepted as a substitute; however, upper-division credit will not be awarded.

N/A

PART VII: APPROVALS

Date approved by the department or school: 10/22/13

Date approved by the college curriculum committee: 11/11/13

Date approved by the Honors Council *(if this is an honors course):*

Date approved by CAA: CGS:

*In **writing-active courses**, frequent, brief writing activities and assignments are required. Such activities -- some of which are to be graded – might include five-minute in-class writing assignments, journal keeping, lab reports, essay examinations, short papers, longer papers, or a variety of other writing-to-learn activities of the instructor's invention. Writing assignments and activities in writing-active courses are designed primarily to assist students in mastering course content, secondarily to strengthen students' writing skills. In **writing-intensive courses**, several writing assignments and writing activities are required. These assignments and activities, which are to be spread over the course of the semester, serve the dual purpose of strengthening writing skills and deepening understanding of course content. At least one writing assignment is to be revised by the student after it has been read and commented on by the instructor. In writing-intensive courses, students' writing should constitute no less than 35% of the final course grade. In **writing-centered courses** (English 1001G, English 1002G, and their honors equivalents), students learn the principles and the process of writing in all of its stages, from inception to completion. The quality of students' writing is the principal determinant of the course grade. The minimum writing requirement is 20 pages (5,000 words).

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581-6696	**581-3413**	**581-2412**	**581-6583**