

Memorandum

To: Undergraduate Curriculum Committee
From: William Gabrenya, Chair, Undergraduate Programs
Through: Mary Beth Kenkel, Dean of CoPaLA
Subject: New research methods courses
Date: January 18, 2008

(Signed copies to be delivered at meeting)

The School of Psychology will begin to transition from its current research methods, statistics, and computer literacy courses to a new set of courses in Fall 2008. The first step in this process is approval of the new courses so one of them can be placed on the schedule for Fall 2008. Subsequently, we will work with Computer Science to develop a new computer literacy course that introduces more computer concepts than we currently teach in Psychology and tailors applied skills to those relevant to the needs of a Psychology major.

The new courses, PSY2512 and PSY2513 (Psychology Research Methods and Statistics 1 and 2) will replace BUS2703 (Business Statistics), PSY2511 (Introductory Research Methods) and PSY3511 (Advanced Research Methods).

The current CL course is PSY2511. The computer skills and concepts section of this course will be replaced by a new 2- or 3-credit course taught by Computer Science.

This course is available for student registration only after the approval process has been completed.

SUBJECT _____ COURSE NO. _____ CREDIT HOURS _____ TERM TO BE ADDED TO THE FILE _____
Alpha Prefix (e.g., CSE) Number Choice (e.g., 1301) (e.g., Fall 2006)

CLASS HOURS _____ LECTURE HOURS _____ LAB HOURS _____ CONTACT HOURS (CEU ONLY) _____

DEPARTMENT _____ SCHEDULE TYPE _____
(e.g., Computer Sciences) (e.g., Lecture, Lab or Special Project)

- COLLEGE OF AERONAUTICS-23 COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS-25
- COLLEGE OF BUSINESS-24 COLLEGE OF SCIENCE-26
- COLLEGE OF ENGINEERING-01 UNIVERSITY COLLEGE EXTENDED STUDIES-27

COMPUTER TITLE *Restricted to 25 characters, including spaces* _____

CATALOG TITLE _____

CATALOG DESCRIPTION OF COURSE *Limited to 350 characters, including spaces*

In addition, you may attach a course syllabus and/or more detailed description.

- RESTRICTIONS
- Prerequisite _____ Corequisite _____
Course Number Course Number
 - Prerequisite _____ Corequisite _____
Course Number Course Number
 - Prerequisite _____ Corequisite _____
Course Number Course Number

- GRADES TO BE ISSUED
- A, B, C, D, F
 - A, B, C, D, F, CEU
 - CEU
 - S, U
 - P, F
 - Other _____

ADDITIONAL RESTRICTION _____
(e.g., Major, Class Level, Department Head Approval)

If this course replaces a course currently offered in BANNER, please indicate old course information

SUBJECT *Alpha Prefix (e.g., CSE)* _____ COURSE NO. *(e.g., 1301)* _____

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

Originator _____ Date _____ Chair, Graduate Council _____ Date _____

Department Head/Program Chair _____ OR _____

Dean or Associate Dean _____ Date _____ Chair, Undergraduate Curriculum Committee _____ Date _____

CATALOG DIRECTOR	REGISTRAR'S USE ONLY
These changes/additions have been made for the _____ University/Extended Studies Catalog and entered into the BANNER term named above. _____ <i>Catalog Director Date</i>	SCACRSE _____ SCADTEL _____ SCAPREQ _____ SCABASE _____ SCARRES _____ Operator Init _____ Date _____

Psychology Research Methods and Statistics 1

PSY2512

Fall 2008

Instructor: Dr. Richard
Time: Tuesday-Thursday, 8am-9:15am
Place: PSY-3
Web site: Blackboard – PSY2512
Contact: rafisher@cambridge.uk
Prerequisites: PSY1411, CSE1301

Texts

Heiman, G. W. (2000). *Understanding research methods and statistics: An integrated introduction for psychology*. Houghton Mifflin.

Publication Manual of the American Psychological Association (2001). (5th ed.). Washington, DC: American Psychological Association.

Morgan, G. A. (2006). *SPSS for Introductory statistics: Use and interpretation*. Erlbaum.

Purpose of the course

This is the first in a two-course sequence that covers research methods and elementary statistics. The first course is designed to introduce simple descriptive and inferential statistics and to lay the groundwork for implementing common research design by introducing foundational concepts common to most or all of the designs used by psychologists. Computer analysis of data using SPSS and standards for writing manuscripts in Psychology are stressed in both PSY2512 and PSY2513.

Goals

You should understand the following concepts in statistics:

- The nature of data and variables
- Central tendency, dispersion, calculation of descriptive statistics
- Logic of hypothesis testing in inferential statistics
- Inferential statistics, including t-tests, correlation and contingency table analysis
- Creation of datasets in SPSS; data manipulation; descriptive statistics; t-test, correlation, contingency table analysis

You should understand the following concepts in research design:

- Philosophical basis for quantitative research in psychology
- Overview of research methods available to psychologists
- The nature of theories in social science
- Practical skills in literature search
- Overview of quantitative research designs
- Reliability, validity
- Sampling
- Research ethics

Grades

Your grade in this course will be our evaluation of your performance in acquiring theoretical and conceptual principles and in learning practical skills. Frequent quizzes on individual chapters will be given. Two exams will be given in addition to a comprehensive final exam.

Exam 1	15%
Exam 2	15%
Final Exam	20%
Quizzes	15%
Projects	25%
Attendance, classroom behavior	10%

Final grades will be based on the percentage of points earned out of the total.

A	≥ 90%
B	80.0-89.99%
C	70.0-79.99%
D	60.0-69.99%
F	≤ 60%

Project Grading

Projects will be graded A-B-C-D-F with pluses and minuses. A "B" indicates you have done good work and an "A" that your work is exceptional.

Attendance

You must come to class. Labs will be mandatory on dates for which they are scheduled. Please see the lab schedule.

You must present a written excuse if you miss class or labs. You are allowed 2 unexcused absences. Each additional absence will result in a reduction of half a letter grade and after 10 absences, you will fail the class. Late arrival to class will be counted as one-half of an absence. However, if you are late, please check with the instructor to make sure that you have been marked as present.

Project Written Products

All assignments must be turned in at the beginning of class, on the day that they are due. Late assignments will not be accepted unless you present a written excuse. Written excuses include: death in family or serious medical problem. Athletes and ROTC students who will miss class due to a scheduled event must turn in the assignments early. To turn in an assignment early, bring it to the Psychology main office to be date stamped then place it in the instructor's mailbox in the front of the Psychology building.

All assignments must be turned in exactly as indicated in the assignment (e.g., on paper, on disk, etc.). It is the responsibility of the student to make sure that assignments are received by the instructor in the specified manner.

Classroom demeanor

Please follow these guidelines on classroom interaction and interpersonal behavior.

- Come to class on time. Don't leave early. (See Attendance section for late penalty)
- Don't skip class. If you do, present a written reason to the instructor.
- Focus on the class that you're in, not other classes (e.g., don't do homework for another class, read, etc.).
- Participate in class. Argue, critique, comment. But do so based on your reading of the assigned material and performance of projects. *Ad hominem* (aimed at the person, not the idea) comments are never appropriate.
- You may bring your laptop to class to take notes, but you may not use it for other purposes, such as checking email, surfing the web, cybersex, working on lab projects or other class' projects.
- Cell phones and beepers. A free exchange of ideas in the classroom is necessary for university education. However, you must limit your communication to people in the room. Cell phones must be turned off and beepers must be set to "vibrate" mode while you are in class.
- Staying awake is always welcome, even when the material is dry or difficult.

Lab demeanor

Labs must use time very efficiently! Please be aware of these requirements for lab behavior:

- You must not come to lab late. If you are late, the door may be locked! If for some reason the door is not locked, you might be admitted but you will be marked "late"
- Computers may only be used for lab projects. No email! No IM!
- You must attend the lab to which you have been assigned. If you must miss that lab, you may go to another lab in the same week only after informing the lab TA.

Academic Honesty:

All work in this class must be performed individually, although mutual help among students is encouraged. All projects are assumed to be individual projects unless explicitly stated otherwise by the instructor. Plagiarism is defined as inappropriate use of others' work, including that of classmates and published materials. The use of one's own papers and materials prepared for another class without express permission of instructor is considered plagiarism. The APA Publication Manual describes the appropriate citation for published materials. You may help others with their projects by demonstrating technical skills (e.g., showing someone where to find a command in a menu structure) but you may not pass any materials to others either electronically or otherwise. In other words, you can tell classmates how to do something, but you can't do it for them. You may not walk a student through a project step-by-step. A primary indicator of plagiarism is nearly-identical projects. If you turn in a project that is nearly identical to someone else's, we will examine them very carefully for plagiarism.

College of Psychology and Liberal Arts Statement on Academic Dishonesty

Academic dishonesty is the willful misrepresentation of all or any part of another's work as one's own. Copying another's answers or giving or receiving proscribed assistance during classroom or take-home examinations, assignments, papers, research reports, and projects is cheating. Plagiarism in all its forms is cheating; it is the student's responsibility to understand academic expectations for attribution and citation. A student who aids another in cheating shares the guilt of the offense. Additional details concerning academic dishonesty and university policies can be found on the Psychology web site and at <http://www.fit.edu/current/plagiarism.pdf>. The College of Psychology and Liberal Arts pursues all cases of academic dishonesty vigorously, according to University guidelines.

Schedule

Wk	Topic
1	Introduction to research methods in psychology; philosophy of science
2	Overview of research methods; quantitative vs. qualitative research; theories
3	Performing a literature search; writing a manuscript in APA format; ethics
4	Research designs
5	Introduction to statistical methods; probability
6	Variables; levels of measurement; central tendency
7	Reliability; variability
8	Validity
9	Introduction to SPSS; creating datasets and manipulating variables; calculating descriptive statistics
10	Sampling; correlation; elementary item analysis
11	Introduction to hypothesis testing and inferential statistics
12	Two-group designs; t-tests; SPSS techniques
13	Project: analysis of archival dataset
14	Contingency table analysis, chi-square; SPSS
15	Project: manuscript preparation

Exams: Weeks 6, 10

Quizzes: Most weeks

This course is available for student registration only after the approval process has been completed.

SUBJECT PSY COURSE NO. 2513 CREDIT HOURS 4 TERM TO BE ADDED TO THE FILE Fall 2008
Alpha Prefix (e.g., CSE) Number Choice (e.g., 1301) (e.g., Fall 2006)

CLASS HOURS 3 LECTURE HOURS 3 LAB HOURS 2 CONTACT HOURS (CEU ONLY) _____

DEPARTMENT School of Psychology SCHEDULE TYPE Lecture
(e.g., Computer Sciences) (e.g., Lecture, Lab or Special Project)

- COLLEGE OF AERONAUTICS-23
- COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS-25
- COLLEGE OF BUSINESS-24
- COLLEGE OF SCIENCE-26
- COLLEGE OF ENGINEERING-01
- UNIVERSITY COLLEGE EXTENDED STUDIES-27

COMPUTER TITLE Restricted to 25 characters, including spaces Methods and Statistics 2

CATALOG TITLE Psychology Research Methods and Statistics 2

CATALOG DESCRIPTION OF COURSE Limited to 350 characters, including spaces
 Provides in-depth analysis of correlational and experimental research design, survey research, and laboratory procedures. Introduces analysis of between and repeated design experimental data using analysis of variance. Includes a laboratory component in which students perform all phases of a research project.

In addition, you may attach a course syllabus and/or more detailed description.

RESTRICTIONS Prerequisite PSY2512 Corequisite _____
Course Number Course Number

Prerequisite _____ Corequisite _____
Course Number Course Number

Prerequisite _____ Corequisite _____
Course Number Course Number

GRADES TO BE ISSUED
 A, B, C, D, F
 A, B, C, D, F, CEU
 CEU
 S, U
 P, F
 Other _____

ADDITIONAL RESTRICTION _____
(e.g., Major, Class Level, Department Head Approval)

If this course replaces a course currently offered in BANNER, please indicate old course information

SUBJECT PSY COURSE NO. 3511 (in F09)
Alpha Prefix (e.g., CSE) (e.g., 1301)

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

Originator Date Chair, Graduate Council Date

Department Head/Program Chair OR

Dean or Associate Dean Date Chair, Undergraduate Curriculum Committee Date

CATALOG DIRECTOR	REGISTRAR'S USE ONLY
These changes/additions have been made for the _____ University/Extended Studies Catalog and entered into the BANNER term named above. _____ <small>Catalog Director Date</small>	SCACRSE _____ SCADTEL _____ SCAPREQ _____ SCABASE _____ SCARRES _____ Operator Init _____ Date _____

Psychology Research Methods and Statistics 2

PSY2513

Spring 2008

Instructor: Dr. Richard
Time: Tuesday-Thursday, 8am-9:15am
Wednesday, 8am-9:45am
Place: PSY-3
Web site: Blackboard – PSY2512
Contact: rafisher@cambridge.uk
Prerequisite: PSY2512

Texts (same as PSY2512)

Heiman, G. W. (2000). *Understanding research methods and statistics: An integrated introduction for psychology*. Houghton Mifflin.

Publication Manual of the American Psychological Association (2001). (5th ed.). Washington, DC: American Psychological Association.

Morgan, G. A. (2006). *SPSS for Introductory statistics: Use and interpretation*. Erlbaum.

Purpose of the course

This is the second in a two-course sequence that covers research methods and elementary statistics. The second course includes more advanced inferential statistics and their analysis with SPSS. It covers the application and implementation of the major research designs used in psychology. The instructor will guide you through research projects that employ two of these designs, including data collection, analysis, and manuscript preparation.

Goals

You should understand the following concepts in statistics:

- Correlation and univariate regression
- One-way and two-way analysis of variance
- Between and repeated designs
- Knowledge of other advanced techniques and their common applications
- Use of SPSS to perform these analyses

You should understand the following concepts in research design:

- Experiments, experimental procedures, problems and artifacts
- Laboratory and field research techniques
- Survey design and item analysis
- Single subject designs

Grades

Your grade in this course will be our evaluation of your performance in acquiring theoretical and conceptual principles and in learning practical skills. Frequent quizzes on individual chapters will be given. Two exams will be given in addition to a comprehensive final exam.

Exam 1	15%
Exam 2	15%
Final Exam	15%
Quizzes	15%

Projects	30%
Attendance, classroom behavior	10%

Final grades will be based on the percentage of points earned out of the total.

A	≥ 90%
B	80.0-89.99%
C	70.0-79.99%
D	60.0-69.99%
F	≤ 60%

Project Grading

Projects will be graded A-B-C-D-F with pluses and minuses. A "B" indicates you have done good work and an "A" that your work is exceptional.

Attendance

You must come to class. Labs will be mandatory on dates for which they are scheduled. Please see the lab schedule.

You must present a written excuse if you miss class or labs. You are allowed 2 unexcused absences. Each additional absence will result in a reduction of half a letter grade and after 10 absences, you will fail the class. Late arrival to class will be counted as one-half of an absence. However, if you are late, please check with the instructor to make sure that you have been marked as present.

Project Written Products

All assignments must be turned in at the beginning of class, on the day that they are due. Late assignments will not be accepted unless you present a written excuse. Written excuses include: death in family or serious medical problem. Athletes and ROTC students who will miss class due to a scheduled event must turn in the assignments early. To turn in an assignment early, bring it to the Psychology main office to be date stamped then place it in the instructor's mailbox in the front of the Psychology building.

All assignments must be turned in exactly as indicated in the assignment (e.g., on paper, on disk, etc.). It is the responsibility of the student to make sure that assignments are received by the instructor in the specified manner.

Classroom demeanor

Please follow these guidelines on classroom interaction and interpersonal behavior.

- Come to class on time. Don't leave early. (See Attendance section for late penalty)
- Don't skip class. If you do, present a written reason to the instructor.
- Focus on the class that you're in, not other classes (e.g., don't do homework for another class, read, etc.).
- Participate in class. Argue, critique, comment. But do so based on your reading of the assigned material and performance of projects. *Ad hominem* (aimed at the person, not the idea) comments are never appropriate.
- You may bring your laptop to class to take notes, but you may not use it for other purposes, such as checking email, surfing the web, cybersex, working on lab projects or other class' projects.

- Cell phones and beepers. A free exchange of ideas in the classroom is necessary for university education. However, you must limit your communication to people in the room. Cell phones must be turned off and beepers must be set to "vibrate" mode while you are in class.
- Staying awake is always welcome, even when the material is dry or difficult.

Lab demeanor

Labs must use time very efficiently! Please be aware of these requirements for lab behavior:

- You must not come to lab late. If you are late, the door may be locked! If for some reason the door is not locked, you might be admitted but you will be marked "late"
- Computers may only be used for lab projects. No email! No IM!
- You must attend the lab to which you have been assigned. If you must miss that lab, you may go to another lab in the same week only after informing the lab TA.

Academic Honesty:

All work in this class must be performed individually, although mutual help among students is encouraged. All projects are assumed to be individual projects unless explicitly stated otherwise by the instructor. Plagiarism is defined as inappropriate use of others' work, including that of classmates and published materials. The use of one's own papers and materials prepared for another class without express permission of instructor is considered plagiarism. The APA Publication Manual describes the appropriate citation for published materials. You may help others with their projects by demonstrating technical skills (e.g., showing someone where to find a command in a menu structure) but you may not pass any materials to others either electronically or otherwise. In other words, you can tell classmates how to do something, but you can't do it for them. You may not walk a student through a project step-by-step. A primary indicator of plagiarism is nearly-identical projects. If you turn in a project that is nearly identical to someone else's, we will examine them very carefully for plagiarism.

College of Psychology and Liberal Arts Statement on Academic Dishonesty

Academic dishonesty is the willful misrepresentation of all or any part of another's work as one's own. Copying another's answers or giving or receiving proscribed assistance during classroom or take-home examinations, assignments, papers, research reports, and projects is cheating. Plagiarism in all its forms is cheating; it is the student's responsibility to understand academic expectations for attribution and citation. A student who aids another in cheating shares the guilt of the offense. Additional details concerning academic dishonesty and university policies can be found on the Psychology web site and at <http://www.fit.edu/current/plagiarism.pdf>. The College of Psychology and Liberal Arts pursues all cases of academic dishonesty vigorously, according to University guidelines.

Schedule

Wk	Topic
1	Observational research methods
2	Single subject research
3	Review of statistical techniques taught in RMS-1
4	Simple regression

5	Survey research
6	Survey construction, item analysis; elementary factor analysis
7	Project 1: Survey
8	Experimental designs
9	Analysis of variance
10	SPSS and ANOVA
11	Running experiments in the lab and field
12	Project 2: Experiment
13	Two-way ANOVA; Repeated designs
14	Overview of advanced statistical techniques and their applications
15	Project reports; wrapping up

Exams: Weeks 6, 10

Quizzes: Weeks 2, 4, 5, 6, 7, 8, 10, 12