A. Protocol

Course Name: Statistics and Research Methods in Psychology II: Multivariate
Course Number: PSY 762
Credits: 3
Prerequisites: Successful completion of PSY 761
Maximum Class Size (face-to-face): 30
Maximum Class Size (online): (Choose which one is appropriate or both if applicable)

B. Objectives of the Course:

1) At the conclusion of this course students will be able to…
   a) Interpret advanced statistics that include multiple independent variables.
   b) Interpret advanced statistics that include multiple dependent variables.
   c) Conduct data collection techniques.
   d) Critique scholarly journal articles, focusing on design and statistical techniques.
   e) Critique articles for internal and external validity.
   f) Recognize alternative research designs such as path analysis, meta analysis, Chi Square and other nonparametric tests of significance.

2) Apply the principles of research design.
   a) Identify the relevance of and apply the principles of scholarly research to applied problems.
   b) Critically evaluate research designs, research proposals, and published works by identifying strengths and weaknesses.
   c) Develop and write a research proposal or literature review in APA format.
   d) Conduct on line literature searches.
   e) Recognize and apply the ethics of the research process.
   f) Write a scholarly APA-style research proposal.

3) Use computer facilities for tabulating and computing basic statistical problems using a packaged statistical program such as SPSS. This will include
   a) Data entry.
   b) Basic descriptive statistics.
c) Basic inferential statistics including t-tests and one-way ANOVA. Advanced inferential statistics including factorial ANOVA, MANOVA, ANCOVA, AND MANCOVA.

d) Multiple regression.

e) Data reduction techniques such as factor analysis.

C. Catalog Description:

This course is designed to give students the basic information they need to interpret the multivariate research methods and statistics that are used most frequently in psychology. The focus is on acquiring the skills to critically evaluate a research report, analyze and interpret data, and to write a research paper. This course is designed to provide a continuation of the material from Psy 766.

D. Outline of the Course:

1) Review of basic statistics.
2) Review of basic research designs.
3) Review of APA style
4) Internal and external validity
5) Research designs with multiple independent variables.
6) Research designs with multiple dependent variables.
7) Multiple regression.
8) Factor analysis.
9) Multivariate analysis of variance.
10) Discriminant Analysis.
11) Meta-Analysis.

E. Teaching Methodology:

1) Traditional Classroom Methodology

New topics will be introduced in a variety of formats (lecture format and small group work) and discussion to facilitate comprehension and application of the material under study. Students will need access to computer statistical software (SPSS), library resources and word processing program.

2) Online Methodology

Quality Matters™ Statement – The online course follows the standards of the Quality Matters™ rubric.

F. Text:

G. Assessment Activities:

1) Traditional Classroom Assessment
   a) In-class quizzes.
   b) Homework assignments.
   c) Comprehensive tests.
   d) Article critiques and presentations.
   e) APA-style research proposal

2) Online Assessment

H. Accommodations for Students with Disabilities:

*Accommodations for Students with Disabilities*

Students with disabilities:
• Reserve the right to decide when to self-identify and when to request accommodations.
• Will register with the Office for Students with Disabilities (OSD) **each semester** to receive accommodations.
• Might be required to communicate with faculty for accommodations, which specifically involve the faculty.
• Will present the OSD Accommodation Approval Notice to faculty when requesting accommodations that involve the faculty.

Requests for approval for reasonable accommodations should be directed to the Office for Students with Disabilities (OSD). Approved accommodations will be recorded on the OSD Accommodation Approval notice and provided to the student. Students are expected to adhere to OSD procedures for self-identifying, providing documentation and requesting accommodations in a timely manner.

Contact Information:
• Location: Azorsky Hall – Room 105
• Phone: (724) 938-5781
• Fax: (724) 938-4599
• Email: osdmail@calu.edu
• Web Site: [http://www.calu.edu/current-students/student services/disability/index.htm](http://www.calu.edu/current-students/student services/disability/index.htm)

I. Supportive Instructional Materials, e.g. library materials, web sites, etc.


Additional Information for Course Proposals

J. Proposed Instructors: Approved Psychology Faculty
K. Rationale for the Course: Changes to this syllabus and PSY766 are needed to combine research and statistics topics in the same class, while presenting these topics in a scaffold manner. PSY766 will present both research and statistical methods commonly used in psychology that are univariate. PSY767 will present research and statistical procedures that are common in psychology and are multivariate.

L. Specialized Equipment or Supplies Needed: SPSS available on campus.

M. Answer the following questions using complete sentences:

1. Does the course require additional human resources? The course does not require additional human resources.

2. Does the course require additional physical resources? (Please explain) The course does not require additional physical resources.

3. Does the course change the requirements in any particular major? The course does not change the requirements for the graduate school psychology program.

4. Is the course replace an existing course? (If so, list the course) This course does not replace an existing course. It is just a reorganization of material.

5. How often will the course be taught? The course will be taught every Spring semester.

6. Does the course duplicate an existing course in another Department or College? (If the possibility exists, indicate course discipline, number, and name) The course does not duplicate an existing course.

7. What is the recommended maximum class size for this course? The recommended maximum size is 20.

N. If the proposed course includes substantial material that is traditionally taught in another discipline, you must request a statement of support from the department chair that houses that discipline. The course does not include substantial material taught in another discipline. The material is tailored to the school psychology discipline.

O. Please identify if you are proposing to have this course considered as a menu course for General Education. If yes, justify and demonstrate the reasons based on the categories for General Education. The General Education Committee must consider and approve the course proposal before consideration by the UCC. This course is graduate level and will not be on the general education menu.
P. Provide Approval Form (electronically).

Additional Guidelines

The following are additional guidelines that you must follow which will expedite your course proposal. Failure to follow these guidelines will result in the return of the proposal to the department.

1. Be sure that your proposal is in the correct format (Guidelines for New Course Proposals) and that all questions have been completely answered.

2. Be sure that you have completed and attached the Application to Establish a New Course form and/or the Advisement Sheet Revision form and that the appropriate signatures have been affixed. Please send through the process electronically (the preferred method) or by paper. No items will be placed on the agenda until the Chair of the UCC is in possession of these forms.

3. Be sure that you include an updated advisement sheet for any course that is being required by the department or is classified as a restricted elective. In addition, you must include an electronic copy (MS Word or PDF) of the current advisement sheet(s) with your proposal. Be certain that all advisement sheets affected by the proposed course change be included with your proposal.

4. When submitting materials for consideration by the Curriculum Committee, you must provide an electronic copy of each item to be reviewed to the Chairperson.

5. All completed items must be in the hands of the Chairperson of the Curriculum Committee a minimum of one week prior to the next regularly scheduled meeting.

6. Any department requesting a course name change, number change, prefix changes, credit changes, etc. must submit this request on the Application to Establish a New Course Form and submit electronically.

7. New advisement sheets, major proposals, minors, LOCs, Certificates, or changes to advisement sheets will become effective the fall semester following committee approval. **The advisement sheets must also include the committee approval date and the effective date on the advisement page.** Submit this request on the Advisement and/or Program Changes form.

8. New courses will become effective the semester following committee approval.

9. Any references listed must be in the appropriate bibliographic format for the discipline.

10. Online courses should follow the Quality Matters™ rubric and is posted on the UCC website. Be sure that you include the online teaching methodology statement (refer E.2 above) that refers to the Quality Matters™ rubric.
11. All course objectives must follow Bloom’s Taxonomy learning domains located on the UCC website.