

**PSY 670.01W: Multivariate Statistics (Summer II 2015)**  
**COURSE SYLLABUS**

**Instructor:** Maria A. Carlson, Ph.D.

**Office Hours:** see the Virtual Office in eCollege or email me

**Email:** maria.carlson@tamuc.edu

<b>COURSE INFORMATION</b>
---------------------------

**Materials – Textbooks, Readings, Supplementary Readings:**

*Textbook(s) Required: Using Multivariate Statistics, 6<sup>th</sup> edition, by Tabachnick & Fidell*

**Course Description:** This course, a Graduate School approved level IV research tools course, provides a conceptual introduction, as well as computational and computer competence, in modern multivariate procedures. Topics include multiple regression, discriminant function analysis, analysis of covariance, multiple analysis of variance, item analysis, cluster analysis, factor analysis, and canonical correlation. Applications to measurement and test construction are emphasized.

<b>COURSE REQUIREMENTS</b>
----------------------------

Your grade will be assessed in three ways: 1) online discussions, 2) homework, and 3) exams.

**Grading**

Your grade is based on the number of points you earn out of 100. At several points during the semester, you will be asked to contribute to online discussion of various topics. This will be done via eCollege discussion boards, and a portion of your grade is based on your level of contribution. There also are 10 homework assignments distributed pretty evenly across the topics we'll cover. Finally, there are two exams.

In sum, these components of the course add up to 100% in the following way:  
(participation/discussions = 20%) + (10 homework assignments X 2% = 20%) + (2 exams [26 + 34] = 60%) = 100%

You need 90 points or better for an 'A', 80 points or better for a 'B', 70 points or better for a 'C', and 60 points or better for a 'D'. A total below 60 points will result in an 'F'.

<b>TECHNOLOGY REQUIREMENTS AND RESTRICTIONS</b>
---

This course will be enhanced using **eCollege**, the Learning Management System used by Texas A&M University-Commerce. To get started with the course, go to: <https://leo.tamuc-commerce.edu/login.aspx>.

You will need your CWID and password to log in to the course. If you do not know your CWID or have forgotten your password, contact Technology Services at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

The following information has been provided to assist you in preparing to use technology successfully in this course.

- Internet access/connection – high speed recommended (not dial-up)
- Access to either the new version of SPSS (called PASW) or an older version of SPSS. One of these is available in Henderson 214 (Psychology department computer lab) and another version is available on library computers (and many academic libraries and computer labs have some version of SPSS). Do keep in mind that many versions of SPSS are not backward-compatible, so you must be very careful when saving/exporting your work. For data files, just save as the default .sav file, which should be accessible in any version of SPSS. However, for output files, the story is different. You must always export these files rather than simply saving them; all output files should be exported as .rtf or .pdf.
- Microsoft Word (all assignments you submit must end with .doc or .docx)

eCollege is optimized to work in a Microsoft Windows environment. This means that this course will work best if you are using a Windows operating system (XP or newer) and a recent version of Microsoft Internet Explorer (6.0, 7.0, or 8.0). This course also will work with Macintosh OS X along with a recent version of Safari 2.0 or better. Along with Internet Explorer and Safari, eCollege also supports the Firefox browser (3.0) on both Windows and Mac operating systems. It is strongly recommended that you perform a “Browser Test” prior to the start of your course. To launch a browser test, login in to eCollege, click on the ‘myCourses’ tab, and then select the “Browser Test” link under Support Services.

### **ACCESS AND NAVIGATION (eCollege)**

1. The online lecture for each topic can be downloaded from Doc Sharing.
2. You will complete the homework assignments by accessing the ‘assignment’ link in each topic. These links will be visible in the relevant weeks listed in the left navigation bar. Completed assignments should be placed in the appropriate dropbox by the due date.
3. Each exam will be accessible via the ‘exam’ link in the appropriate topic/week.

### **COMMUNICATION AND SUPPORT**

You can communicate with me via email or post to the eCollege Virtual Office.

#### eCollege Student Technical Support

Texas A&M University-Commerce provides students technical support in the use of eCollege.

The student help desk may be reached by the following means 24 hours a day, seven days a week.

- Chat Support: Click on 'Live Support' on the tool bar within your course to chat with an eCollege Representative.
- Phone: 1-866-656-5511 (Toll Free) to speak with eCollege Technical Support Representative.
- Email: [helpdesk@online.tamuc.org](mailto:helpdesk@online.tamuc.org) to initiate a support request with eCollege Technical Support Representative.
- Help: Click on the 'Help' button on the toolbar for information regarding working with eCollege (i.e. How to submit to dropbox, How to post to discussions etc...)

### **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

#### **Course Specific Procedures:**

**Academic Honesty Policy:** Texas A&M University-Commerce does not tolerate plagiarism and other forms of academic dishonesty. Conduct that violates generally accepted standards of academic honesty is defined as academic dishonesty. "Academic dishonesty" includes, but is not limited to, plagiarism (the appropriation or stealing of the ideas or words of another and passing them off as one's own), cheating on exams or other course assignments, collusion (the unauthorized collaboration with others in preparing course assignments), and abuse (destruction, defacing, or removal) of resource material.

**Examination Policy:** All exams are to be taken closed-book. **You are not allowed to take any exam (or do an assignment) after its respective deadline, unless you notify me of extenuating circumstances and I give permission in advance.**

**Dropping the Course:** A student may drop this course by logging into their myLEO account and clicking on the hyperlink labeled 'Drop a class' from among the choices found under the myLEO section of the Web page.

**Incompletes:** The policy for this course is not to allow incompletes. If you cannot complete the course with a grade that you find satisfactory, it is your responsibility to drop it.

### **University Specific Procedures:**

#### **Students with Disabilities:**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

#### **Office of Student Disability Resources and Services**

**Texas A&M University-Commerce**

**Gee Library**

**Room 132**

**Phone (903) 886-5150 or (903) 886-5835**

**Fax (903) 468-8148**

**[StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)**

#### *Student Conduct*

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*).

<b>COURSE OUTLINE / CALENDAR</b>
----------------------------------

This schedule is to be used as a guide. It is possible that it will change.

**Days**

**Topic**

July 13	Topic 1: Syllabus; Introductions
July 14 - 15	Topic 2: Chapter 1 - Introduction, <i>Discussion Post 1</i>
July 16 - 17	Topic 3: Chapter 2 – A Guide to Statistical Techniques
July 18 - 19	Topic 4: Appendix A – A Skimpy Introduction to Matrix Algebra, <b>Homework Assignment 1</b>
July 20 - 21	Topic 5: Chapter 3 – Review of Univariate and Birvariate Statstics, <b>Homework Assignment 2, Discussion Post 2</b>
July 22 - 23	Topic 6: Chapter 13 – Principal Components and Factor Analysis, <b>Homework Assignment 3</b>
July 24 - 25	Topic 7: Chapter 12 – Canonical Correlation <b>Homework Assignment 4; Midterm Exam – July 24<sup>th</sup></b>
July 26 - 27	Topic 8: Chapter 5 – Multiple Regression, <b>Homework Assignment 5</b>
July 28 - 30	Topic 9: Chapter 6 – Analysis of Covariance, <b>Homework Assignment 6, Discussion Post 3</b>
July 31 – August 1	Topic 10: Chapter 7 – Multivariate Analysis of Variance and Covariance; <b>Homework Assignment 7</b>
August 2 - 4	Topic 11: Chapter 9 – Discriminant Analysis, <b>Homework Assignment 8</b>
August 5 - 7	Topic 12: Chapter 4 – Cleaning up your Act, <b>Homework Assignment 9</b>
August 8 - 10	Topic 13: Chapter 10 – Logistic Regression, <i>Discussion Post 4</i>
August 11 - 12	Topic 13 (continued): Logistic Regression continued, <b>Homework Assignment 10</b>
August 13	<b>FINAL EXAM – August 13<sup>th</sup></b>