

ADVANCED STATISTICAL METHODS

Marketing 731-02

Spring 2010

Instructor: Dr. Pavan Rao Chennamaneni
Assistant Professor

Class: Mondays: 6:30-9:50 pm Hyland 2309 (Note that we will be in the lab most of the time)
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Office Hours: **Monday** 1:00 pm to 3:00pm
Wednesday 1:00 pm to 7:00 pm

During the week I will try to respond to e-mail requests within 24 hours--most likely much quicker. I will also access my e-mail on weekends. However, I might not be able to respond back until Monday. Overall, I would expect a relatively quick turn-a-round time on any questions that you might have. If you need to meet me and cannot do so during the scheduled office hours, feel free to e-mail me to set up an alternative meeting time.

Course prerequisites

Graduate status and demonstrated proficiency in mathematics and statistics or ECON 703, or MATH 143 and ECON 245

Required Textbook & Statistical Package

The required textbook is a customized version of "McClave/Benson/Sincich (2008), Statistics for Business and Economics, 10th Edition, by Pearson (ISBN: 0558356176)." In addition, the required Statistical package is SPSS 16.0 (student version) or SPSS 17.0 (student version or graduate pack). Note that both the required textbook and the SPSS software can be bought as a bundle with a heavy discount from the UWW campus bookstore.

Objectives

My objectives for this course are threefold: (a) provide students with a conceptual understanding of higher level statistics used in the disciplines of business and economics, (b) read and interpret reported univariate and/or multivariate analyses found in a business report or an applied research paper, and (c) translate statistical theory into real world applications -- that is, the ability to apply and interpret the empirical results of a variety of statistical techniques such t-test, ANOVA, and the regression analysis.

Course materials will be learned through:

- (1) Lectures and in-class exercises;
- (2) Power Point Slides (available at the class Desire2Learn platform) which include nearly every relevant SPSS clicks (note that there are no audio components in these PPT files);
- (3) Review and practice the textbook examples on your own;
- (4) Self-Assessment Exercises: both questions and answers are provided in each of the self-assessment exercises for most modules (available on D2L);
- (5) Individual and group homework assignments (to be submitted and graded).

ASSESSMENT

Assignment 1 (Individual):	40 points
Assignment 2 (Group):	60 points
Assignment 3 (Group):	60 points
Average of Quiz 1 and 2:	30 points
Team Business Stats assignment:	30 points
Final Exam (Individual):	100 points
Class Participation:	30 points

Total: 350 points

Course Grade will be based on the following scale

A	93-100%
AB	89-92.99%
B	82-88.99%
BC	78-81.99%
C	71-77.99%
CD	67-70.99%
D	60-66.99%
F	0-59.99%

Assignments:

There will be ONE individual assignment (i.e., T-test and possibly cross-tabulation) and TWO group assignments (i.e., ANOVA and Multiple Regression Analysis, respectively). Please see the schedule for relevant dates.

All assignments require the use of the computer (i.e., SPSS and MS-Word). It's the student's responsibility to submit (for group assignment, see guidelines below) the assignments on time and via the right channel (i.e., the corresponding D2L dropbox folders). There will be a 20% late penalty for the individual (group) who submits the assignment late. For our purposes, the word "late" means "30 minutes - twelve hours late". Any further delays will result in a zero score for the assignment. In addition, please avoid "double submission" (i.e., only one word file should be submitted for each assignment. **Note that e-mail should not be used as a channel for assignment submission.**

Students should provide the following information on each assignment:

1. Title page of the assignment (which includes Team # (for group assignments) and the student(s)' names).
2. Include a Table of Contents (each question should be associated with a corresponding page number).
3. Create a meaningful title for each table and figure that you decide to include in your assignment.
4. Make sure that you keep an electronic copy of your report/assignment in a safe place.

Please note that you do NOT need to submit a hardcopy of the assignments

I will provide feedback on the graded assignments and upload to the D2L dropbox

Quiz:

There will be two quizzes during the semester. These quizzes will involve multiple-choice questions. The specific topics covered in these quizzes will be announced in class. The average of the two quiz grades will be included in your final grade calculation.

Group Work:

In general, three students will form a team to work on two group assignments and one business stats presentation/write-up. If you want to work on all the assignments individually, then you need to seek for a special approval by emailing me a formal typed request (with convincing reason(s) that lead you to making such a request) by 2/1/2010. I will make a decision and keep you informed as soon as possible. Students will be given an opportunity to form a group and submit a list of members by 9:30 pm on 2/1/2010. Subsequently, I will randomly assign those who do not voluntarily sign up for a group. I reserve the right to combine two groups if only one or two students sign up for a team. Any member can be removed from the group at the written/signed request of other members if that person is not pulling his/her weight. Each student will evaluate his/her group members' contributions (your evaluation information will be kept confidential; that is, your teammate will not have access to your evaluation toward him/her) on every team assignment. This is done through a peer evaluation form that requires each team member to assign every other team member a grade (BC, C, CD, D or F). Average peer grade will be computed and 10% points docked for every grade lower than a B. **If you feel that any team member's contribution/performance is average or excellent (grade of B or above), then you do NOT have to submit a peer evaluation form for that team member.** Please be aware that it is the student's responsibility to let me know any within-group communication (or other) problems as early as possible. Early resolution of team issues is very critical. I will ignore peer evaluations if you have not tried to first resolve the issues. If your efforts to resolve the issue are not successful, you must inform me and I can then intervene. If this does not resolve the issue and a particular team member(s) continue to free ride, peer evaluations will be invoked.

Each group needs to **assign one person to be the group liaison** who is responsible to submit the completed group assignment on time. In short, each team will complete and upload only one version of the assignment to the instructor. Please download the homework assignments from the content area of our class Desire2Learn website. For the group assignments, team members are expected to communicate with each other on a regular basis and to help each other (within the same group; NOT across groups) regarding the group assignment questions.

Active learning will occur through self-motivated practice and constant interaction with members in your group. These interactions will enable you to adequately learn the course materials.

Team Business Stats Presentation

We will feature business statistics presentations in class. Your team will pick up one recent business statistics paper (published by a scholarly journal in or after year 2000) related to one of the following disciplines: accounting, economics, management, marketing, management information systems, or a particular discipline approved by the instructor in advance. The chosen paper should be relevant (i.e., your chosen paper should employ the statistical methods covered in our class), concise, informative, and interesting.

Each member should contribute to the presentation. Each team needs to submit a write-up (see guidelines below) along with the Power Point file to the corresponding D2L dropbox folder 24 hours prior to the scheduled presentation time. The team liaison who is responsible for submitting both files on behalf of his/her team should receive an automatic confirmation from D2L that both the write-up MS-Word and the PowerPoint file have successfully been delivered to the right place. Ensuring that the files have arrived on time is the team liaison's

responsibility. On the scheduled (schedule to be determined after all teams are formed) presentation time, your team should give a 12-15 minutes presentation, and then facilitate a 5 minutes Q&A discussion time.

Rely on a source other than a search engine news source– i.e., please go to ABI/Inform, EBSCO (business), or other UW-Whitewater databases to search for your article. Do not read the article(s) to the class! Instead, please ask questions and present the material in an interesting manner. Your grade depends on the quality and comprehensiveness of your team write-up (note that proper grammar and spelling are expected in all written documents), and stimulating presentation/discussion.

You do not have to dress professionally on your presentation day. However, a business casual dress code should be followed. Please let me know in advance of any non-contributors/problems, so that I may have an opportunity to intervene and, hopefully, get your team to be a well functioning unit.

As for the audience, you are encouraged to participate in the presentation by asking question(s). Also, note that you are required to read the article(s) before coming to class.

Paper Write-Up

- No more than 3 pages excluding the cover page and references
- Double-spaced
- Font size 12
- Times New Roman font
- Margin of 1 inch on all sides
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Please note that both the write up and the PowerPoint files have to be submitted online and hard copies must be submitted on the day of the presentation (make sure that the write up file is the same as the soft copy submitted to D2L).

Quality matters! In your submitted write-up, please include the following information:

- (1) On the cover page, include the title of your topic, team # (whatever number), class # (e.g., MKTG731), and participating members' full names.
- (2) Summary: Summarize the content of the articles. Focus on the key research question(s), the methodology, the findings, and the implications. Do NOT copy text from the article(s) – your job is to summarize and analyze (i.e., compare and contrast)!
- (3) Analysis: Why is this article relevant to our class (i.e., advanced statistical methods)? How does it demonstrate a business statistics issue? You may quote the some words or up to two sentences used by the original authors, but you should create a thorough analysis on your own.
- (4) At least TWO discussion questions (along with likely answers/arguments): Develop some interesting questions that may stimulate active class discussions and provide possible answers/debates. A good question does not necessarily have to have a “CORRECT” answer. Indeed, it would be great if your questions can stimulate debate in the class.
- (5) References: Title of Article, Author, Title of Publication, date of publication. The page numbers are required if a print source or exact website address if from the Internet. Use APA format.

Final Exam

The individual final exam is assigned to see if you can solve relevant statistical problems on your own. Notably, the final exam is *comprehensive* and closed book/notes in nature. No one is supposed to communicate with other students at all during the final individual exam time. As a reminder, no make-up exam will be given.

Class Discussion

This is a graduate class, and as such, I have a high expectation that students will contribute to the learning environment through class participation.

This syllabus is subject to change. All changes will be announced via our course D2L webpage.

The University of Wisconsin-Whitewater is dedicated to a safe, supportive and non-discriminatory learning environment. It is the responsibility of all undergraduate and graduate students to familiarize themselves with University policies regarding Special Accommodations, Misconduct, Religious Beliefs Accommodation, Discrimination and Absence for University Sponsored Events. (For details please refer to the Undergraduate and Graduate Timetables; the "Rights and Responsibilities" section of the Undergraduate Bulletin; the Academic Requirements and Policies and the Facilities and Services sections of the Graduate Bulletin; and the "Student Academic Disciplinary Procedures" [UWS Chapter 14]; and the "Student Nonacademic Disciplinary Procedures" [UWS Chapter 17]).

UW-Whitewater's College of Business and Economics students are expected to subscribe to the College's Student Honor Code:

As members of the University of Wisconsin – Whitewater College of Business & Economics community, we commit ourselves to act honestly, responsibly, and above all, with honor and integrity in all areas of campus life. We are accountable for all that we say and write. We are responsible for the academic integrity of our work. We pledge that we will not misrepresent our work nor give or receive unauthorized aid. We commit ourselves to behave in a manner that demonstrates concern for the personal dignity, rights and freedoms of all members of the community. We are respectful of college property and the property of others. We will not tolerate a lack of respect for these values.

If you need special help in taking notes or exams, please inform me early in the semester.

SCHEDULE*

DATE	TOPIC	Course Assignments
1/25	Course Introduction, Review of Stats and Intro to SPSS	
2/1	Hypothesis Testing and One Sample T-test ,	
2/8	Two-Sample Independent T-test, Two sample paired T-test and One-Way ANOVA	Assignment 1 is due by 6:30 pm (chicago time) on 2/15 Quiz 1 is open during this week
2/15	Two-way ANOVA and Simple Regression Analysis	Assignment 2 is due by 6:30 pm (chicago time) on 2/22
2/22	Multiple Regression Analysis and Team Presentations	Assignment 3 is due by 6:30 pm (chicago time) on 3/1
3/1	Residual Diagnosis, Time series and forecasting and Team Presentations	Quiz 2 is open during this week
3/8	Final Exam and other topics (Logistic Regression etc)	

* Tentative schedule, some changes will follow and will be announced in class and the syllabus will be updated online