

BUS 230: Business and Economics Research and Communication
Instructor: James Murray, Ph.D.
Fall 2013

Instructor Information

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Meeting Time / Location

Discussion Session (Section 11D): 2:15pm - 4:05pm Monday Room 1309 Centennial

Lab Sessions:

- Section 05: 2:15pm - 3:10pm Wednesday in Room 216 Wimberly Hall
- Section 06: 3:15pm - 4:10pm Wednesday in Room 216 Wimberly Hall
- Section 07: 4:15pm - 5:10pm Wednesday in Room 216 Wimberly Hall

In Lab sessions you will often need to work with your group members, so it is necessary to come to the time / section you are scheduled.

Course Description

This course explores the scientific method as used in business and economic research. Specifically, it looks at the five main steps in the research process: the identification and definition of the research problem, research design, collection of the data used to study the research problem, statistical analysis of this data, and the interpretation and presentation of the results of the study. Students then apply this knowledge to an actual business problem in order to complete an original research project.

Course Learning Objectives

The learning objectives for this course are given below. After each is a short abbreviation that indicates which College of Business Administration learning goals (given in the next section) that each works towards.

1. Develop the ability to define a research problem: Formulate research questions and hypotheses that are measurable, well-defined, address the overall problem, are directly related, and reflect the scope of the problem (CT-1)
2. Recognize and use the appropriate techniques to collect or use survey data to address a research problem:
 - (a) Recognize the ethical responsibilities of conducting human subjects research. (CBA-5)
 - (b) Compare the advantages and disadvantages of different survey methods (CBA-3).
 - (c) Identify sources of respondent and administrative error and develop the ability to construct and administer a survey instrument that minimizes these errors (CBA-3).
 - (d) Recognize the implications of probability vs. non-probability sampling on the interpretation of primary data (CBA-3).

3. Interpret data using statistical analysis.
 - (a) Identify and compare the types of measurement scales used in conducting research (CBA-3).
 - (b) Analyze the scale of measurement to determine the types of descriptive and inferential statistics that can be used to interpret data (CBA-3).
 - (c) Formulate conclusions and recommendations based upon statistical results (CBA-3).
4. Develop the ability to effectively communicate research results both written and orally (CBA-1, CBA-2).
5. Develop the ability to critically evaluate limitations, errors, and biases in research (CBA-3).

CBA Learning Outcomes

The course learning objectives above contribute to the larger learning goals for all College of Business Administration (CBA) majors,** which are the following,

1. Communication - the ability to convey information and ideas effectively:
 - CBA-1: Students will convey information and ideas in professional business reports.*
 - CBA-2: Students will convey information and ideas in oral presentations.*
2. Decision Making and Critical Thinking - Have the ability to think critically when evaluating decisions.
 - CBA-3: Students will evaluate alternatives and understand the ramifications of those alternatives within a business context.*
3. Global Context of Business - Have the ability to serve others in a global environment.
 - CBA-4: Students will demonstrate the ability to integrate global perspectives in business decisions.
4. Social Responsibility - Be prepared to be socially responsible citizens.
 - (a) CBA-5: Students will demonstrate the ability to consider the effects of business decisions on the entire social system.*
5. Major Competency - Have proficiency in the primary functional area of study:
 - CBA-6: Students will apply functional area concepts and decision-making techniques and tools appropriately while incorporating concepts from other functional business area into the primary area.

* The learning activities in this class are especially designed to further these CBA learning outcomes.

** Developed by faculty with input from students, alumni, and business community. Adopted by faculty vote on January 21, 2010.

Course Resources

- Class website: <http://www.murraylax.org/bus230/fall2013/>. Most material handed out in class will be posted on the class website. There is no guarantee of this, however. Also, *material posted on the class website is not a substitute for coming to class.*
- Textbooks: Much, but not all, of the course material is complemented by the textbooks below. The nature and goals of the class differ somewhat from the textbooks, so they are best used as a reference after we cover the material. The schedule of course content below does indicate pages or chapters of the textbook that correspond with each week's content. The textbook from Textbook Rental is actually a combination of chapters from two textbooks:
 - Zikmund, W.G., B.J. Babin, J.C. Carr, and M. Griffin (ZBCG). (2010). *Business Research Methods*, 8th Edition. Mason, OH: Cengage Learning.
 - Carver, R. and J.G. Nash (CN). (2012). *Doing Data Analysis with SPSS Version 18.0*, 5th Edition. Mason, OH: Cengage Learning.
- Computer Software: You will need to use SPSS (Statistical Package for the Social Sciences) throughout the semester for homework assignments and conducting statistical analysis for your projects.
- *Virtual Desktop* is a new service offered by UW-L that allows to use your own personal computer to connect to a UW-L Windows computer desktop that includes software available in on-campus ITS computer labs and classrooms. You can use this service for this class to be able to use SPSS for your homework and project from your own computer instead of having to use a campus computer.

To use the virtual desktop, you will need to install a small software client (VMware View Client) on your device. The service is available on and off campus. Off-campus use will require a fast Internet connection, DSL or cable, for a good user experience. To learn more and to get started, please visit .
- *Desire2Learn* will be used for turning in homework assignments, taking quizzes and exams, and communicating grades.

Office Hours

Regular office hours are 9:30am-11:00am Monday through Thursday. These are times when you can drop by unannounced and expect me to be in my office. If you would like to make an appointment for a different time, please check my calendar and send me an e-mail. You can visit my calendar to find an available time. It can be found at <http://www.murraylax.org/calendar.html>.

Office hours are not a substitute for attending class. Except when missing class for very extreme circumstances that were promptly discussed with me, it is not acceptable to use office hours to ask questions about material you missed while not in attendance.

Assessment

Learning will be assessed through weekly quizzes, homework, and exams. The grading breakdown will be:

Quizzes / In-class Exercises / Homework: 20%

Exam 1: 20%

Exam 2: 20%

Research Project: 40%

Grade Breakdown

93-100 A 81-88 B 67-76 C

89-92 AB 77-80 BC 57-66 D

I reserve the right to scale every person's grade up by the same amount on any graded item in the event that much of the class falls short of the scale above. However, even if the grades are significantly low, there is no guarantee that I will ever do this.

Quizzes / In-class exercises / Homework

There may be announced quizzes, unannounced (pop) quizzes, and in-class exercises given throughout the semester. Adequate preparation for these will simply involve keeping up class material and completing homework assignments on time. Classes will begin with your questions first, so that you can resolve any problems with assigned work before the quiz begins. Quizzes may sometimes be open book and/or open note. Sometimes in-class exercises will be given, some of which must be done in small groups. Homework assignments outside of work for your project will be given on occasion, and be similar to in-class exercises and exam questions.

Exams

There will be two mid-term exams during the semester. Exams will compose of multiple choice questions based on material covered in class and material from the textbook and any other readings handed out in class. The exam dates are as follows:

- Exam 1: Monday, October 14.
 - Exam 2: Monday, November 25.
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Attendance

Attendance is required to receive credit for quizzes, in-class exercises, and exams. However, if you need to miss a class day or exam day because of illness or emergency you can be excused and arrangements can be made for you to make up missed work. Attendance to your group meetings is always required, unless your group excuses you for illness or emergency according to the terms of your group's contract.

Eagle Alert System

This class will be participating in the UW-L Eagle Alert system through WINGS. The Early Alert system is designed to promote student success. If I notice that you are experiencing difficulties early in the semester (e.g., low assignment scores, poor attendance, minimal engagement in the classroom), I may enter feedback into the program and you will receive an email indicating that feedback has been left. I may also enter positive feedback encouraging you to think about additional opportunities. You will be able to access the feedback through your student center in WINGS. I encourage you to meet with me and use one or more of several helpful campus resources listed here <http://www.uwlax.edu/studentsuccess/>.

E-mail Guidelines

I insist on the following e-mail etiquette rules (many of these are also recommended by the College of Business Administration). Failure to adhere to these guidelines will result in a reply with a friendly reminder to follow these e-mail guidelines.

- Allow one business day to elapse before expecting a reply.
- Questions sent by e-mail should be able to be answered with only a few words, such as 'yes' or 'no' questions. Questions whose answers involve explaining class material are not appropriate over e-mail. For answers to these questions you should come to office hours, or send an e-mail requesting we meet at a different time.
- Always include a subject that is brief but still has sufficient detail, *including the class your are in (BUS 230)*.
- Look at your class notes and syllabus before sending an e-mail. Do not ask a question whose answer is on the syllabus or announced in class (unless you missed class for a legitimate reason).
- Always spell check, grammar check, and re-read your e-mail before sending it.
- When requesting to meet with me outside of regularly scheduled office hours, consult my calendar (<http://www.murraylax.org/calendar.html>) and suggest a time we meet in your first e-mail correspondence.

Disabilities

Any student with a documented disability (e.g., physical, learning, psychiatric, vision, or hearing, etc.) who needs to arrange reasonable accommodations must contact the instructor and the Disability Resource Services office (165 Murphy Library, 785-6900) at the beginning of the semester. Students who are currently using the Disability Resource Services office will have a copy of a contract that verifies they are qualified students with disabilities who have documentation on file in the Disability Resource Services office.

Academic Dishonesty

I follow the policy stated University Academic Handbook with regard to cheating and academic dishonesty. The student handbook can be found online at http://www.uwlax.edu/studentlife/eagle_eye.htm. In the event a student is caught cheating I will pursue the harshest penalty that the University will allow, regardless of how small the offense may appear.

Preliminary Topics Schedule

Below is list of topics and the main readings for this class. This is a preliminary schedule; time constraints and the needs of the class might result in re-arrange the schedule.

Dates	Week	Description
September 4	Week 1	Introduction to the class.
September 9-13	Week 2	Business ethics (ZBCG, Ch 5), NIH tutorial.
September 16-18	Week 3	Survey research (ZBCG, Ch 9), Scale of measurement (ZBCG, Ch 13)
September 23-25	Week 4	Finish scale of measurement, Questionnaire design (ZBCG, Ch 15)
Sept 30-Oct 2	Week 5	Computerized questionnaires: Qualtrix. Sample design (ZBCG, Ch 16)
October 7-9	Week 6	Finish sample design. Survey design (ZBCG, Ch 10)
October 14-16	Week 7	<i>Exam 1 on Monday, October 14. Catch-up.</i>
October 21-23	Week 8	SPSS intro (CN, Sessions 2-5), Descriptive statistics, confidence intervals.
October 28-30	Week 9	Inferential Univariate and Bivariate stats (ZBCG, Ch 21-22), Stats in SPSS (CN, Sessions 10-12)
November 4-6	Week 10	Correlation, Chi-squared test of association (ZBCG, Ch 23, Stats in SPSS (CN, Session 20)
November 11-13	Week 11	Continue previous week work.
November 18-20	Week 12	Statistics practice / stats work on projects.
November 25-27	Week 13	<i>Exam 2 on Monday, November 25. No class Wednesday, November 27.</i>
December 2-4	Week 14	Presenting and communicating results (ZBCG, Ch 25)
December 9-11	Week 15	Final Presentations.

Research Project

Learning how to conduct and complete a group research project is the main goal of this course. The research project assignment has the following characteristics:

1. *Work in groups*: You will work in a group of 3 or 4 students on your semester-long research project. One of the goals of this class is to learn how to work with a team on a substantial project. Employers often stress that they seek people who can work productively with a team as well as have the discipline to work independently and stay on task. While the project is a group project, it will be necessary for the group members to often divide tasks and work independently.
2. *Weekly meetings with group members*: You should meet with your group about once per week outside of class. Throughout most of the semester, there will be assignments related to your semester-long project that will require you to work closely with your group members.
3. *Status-update presentations*: Once every-other week, you will give a short (no more than 4 minutes) presentation to the class on what progress your group had made since your last presentation. Everyone in your group should contribute to the presentation.
4. *Choose a research question*: This is a difficult, underestimated stage of the research project. You need to find a question that (1) is important to answer, (2) whose answer is unknown or not fully known, (3) is focused, (4) can be motivated in a literature review, and (5) that has the ability to be answered by collecting and analyzing data.
5. *Collect primary data*: You must develop your own survey and collect data. Much of the class will focus on collecting samples, writing questionnaire, treating research participants ethically, etc.
6. *Completion of the National Institute of Health (NIH) Tutorial*: Because data collection involves human subjects, before you collect data you must complete this tutorial which describes procedures for collecting data when human subjects are involved.
7. *Write a research report*: The research report does not have a page requirement, but a complete report might be about 20-30 double-spaced pages. A complete research report includes the following sections: (1) an introduction (literature review can be included in the introduction); (2) a full description of your methodology, detailed enough so that a reader could replicate it; (3) a full description of your results; and (4) discussion and conclusion.
8. *Present a research report*: All the research projects will be presented by the entire group on the last day of class, and on final exam day.
9. *Peer evaluation*: You will complete forms from time to time during the semester which asks you to evaluate how well your group members contribute to the project, and each of your group members will similarly evaluate you. You will receive grades based on having completed these forms and based on how well your peers evaluated you. Also, during your oral presentation to the class, your audience will evaluate your presentation. Similarly, you will evaluate your classmates oral presentations.

Research Project Deadlines

Below is a list of weekly assignment that are specific for your project, along with anticipated deadlines. These deadlines are subject to change to give the class flexibility in completing their projects. See the class website for a up-to-date deadlines.

Date	Week	Description
Wednesday, September 4	Week 1	Form groups. Begin brainstorming ideas.
Mon-Fri, September 9-13	Week 2	Turn in 4 ideas for projects (Monday). Meet with instructor outside of class for project approval.
Mon-Fri, September 16-20	Week 3	Meet with instructor outside of class for project approval.
Monday, September 23	Week 4	Informed consent statement due. Annotated bibliography I due.
Monday, September 30	Week 5	Annotated bibliography II due. Introduction section due.
Monday, October 7	Week 6	First draft of questionnaire due.
Monday, October 14	Week 7	Exam 1 on Monday.
Mon-Fri, October 21-25	Week 8	Qualtrix survey due (Monday). Target date to send out surveys. (Friday)
Mon-Wed, October 28-30	Week 9	No project deadlines.
Monday, November 4	Week 10	Methodology section due.
Monday, November 11-13	Week 11	No project deadlines.
Monday, November 18	Week 12	Results section due.
Mon-Wed, November 25-27	Week 13	Exam 2 on Monday. No class Wednesday.
Wednesday, December 4	Week 14	Presentation drafts / plans due.
Mon-Wed, December 9-11	Week 15	Presentations on Monday and Wednesday.

Research Project Grade

Your entire research project is 40% of your final grade, but that total is broken down into the following categories:

Category	Contribution Towards Project Grade
Status update presentations	10%
Introduction first draft	15%
Methodology first draft	15%
Results first draft	15%
Final Written paper	25%
Oral presentation	20%
Peer evaluation	May cause an increase or decrease in overall project grade.

Status Update Presentations

Learning Outcomes:

- LO-4: Develop the ability to effectively communicate research results both written and orally.
- CBA LO-1: Develop the ability to convey information and ideas effectively.
- CBA LO-2: Decision Making and Critical Thinking - Have the ability to think critically when evaluating decisions.

Description: Every two weeks, your group will present a status-update oral presentation to the class. In your presentation you will report to the instructor and the class the progress you have made on your project since the last time you gave a status-update presentation. Presentations should be short, between 3 and 5 minutes.

Scenario: Imagine you have a real world (high paying) job. It is one that requires you to work on significant projects with your coworkers, but without constant guidance or oversight from your boss. Every other week, your boss expects you to give a short status-update presentation to her and other stakeholders of the project (eg: other department heads, other project leaders, sales people, clients, etc).

Purpose: There are multiple purposes that you and your boss are addressing with this project status update presentation. They include the following:

- *Satisfactory progress:* Your boss needs to know that the project is proceeding satisfactorily. She needs to know that you know what you are doing and that you have a plan on what to do next.
- *Adequate workload and sharing of tasks:* Your boss needs to know that you are doing your job, that you are working well with your coworkers, and that you are sharing the workload appropriately.
- *Give feedback:* The stakeholders that you are presenting to may want to give you guidance on the project, or you may have questions for the stakeholders about how to proceed.

Important Items to Consider:

- *Keep it short:* These presentations should be less than 5 minutes.
- *Do not be too general:* Do not just say, "This week we wrote the introduction section of the paper." Share some of the details about the steps you have completed. Without overwhelming your boss (she wants you to do the the work independently), give enough detail so that she has an appreciation for what you do on a daily basis for this project, and that..... Also, by sharing some of the details of your daily tasks, your boss may be able to give some advice on more effective or more efficient ways to approach your work.
- *Everybody speak:* Plan for each person in your group to speak for about one minute. The person should focus on the work he or she did, or the work that he or she has the most knowledge on.
- *Visual aids:* Visual aids are not necessary, but you may find them useful. If you prepare a visual aid to show on the computer, please email it to me before the class. If you have a slide show or PowerPoint presentation, you should limit it to 2 or 3 slides.

Annotated Bibliography

Purpose: One approach to identify a question question is to conduct a *literature review*, that is to explore published research that has already been conducted which is related to your problem. A literature review is also an essential component of the introduction to your research paper. A review of existing literature is used to 1) introduce your reader to relevant background knowledge on the topic and 2) motivate your research question by identifying some aspect of the topic that is important to be answered.

Learning Outcomes:

- LO-1: Develop the ability to define a research problem. Formulate research questions and hypotheses that are measurable, well-defined, address the overall problem, are directly related, and reflect the scope of the problem.
- LO-4: Develop the ability to effectively communicate research results both written and orally.
- CBA LO-1: Develop the ability to convey information and ideas effectively.
- CBA LO-2: Decision Making and Critical Thinking - Have the ability to think critically when evaluating decisions.

Directions: Work in your groups and find 6 journal articles (not popular media articles like newspapers or magazines) related to your topic. The following are good places to start looking:

- Murphy Library Databases <http://www.uwlax.edu/murphylibrary/research/popular.htm>.
- Google Scholar: <http://scholar.google.com>.

For each of the journal article, address the following:

1. Write the bibliography information in APA format (You can use the *Purdue Online Writing Lab* website for help on APA formatting: <http://owl.english.purdue.edu/owl/resource/560/01/>).
2. Write a brief description of the article (5-6 sentences).
3. Write in 1-3 sentences why you want to include a citation of this article in your paper. You do not want to cite every journal article on a topic for your paper. You should consider at least one of the following for each article:
 - Background: Does this article provide important background information that is not common knowledge? Is this background knowledge important for your audience to understand or appreciate your paper?
 - Motivation: Does the journal article's introduction or conclusion suggest that work along the lines of your research project is important? Does it answer a *related* question, suggesting answering your question is also important?
 - Justification: Can this article justify the choices you make for your project? Does the research project described in this journal article make some of the same decisions that you will make in how to go about answering your research question? Will you use similar survey questions, compute similar statistics, etc?

Research Paper: Introduction Section

Purpose: The introduction is the first section of your final paper project. The purpose of your introduction is threefold:

1. Introduce your readers to the purpose of your paper.
2. Put your contribution in context. Describe relevant background information to help your readers understand and appreciate the issues that you will be speaking to. What is already known in this field? What questions or contradictory evidence currently exist in this field?
3. Motivate your paper. Imagine your readers are reading this paper voluntarily. You need to convince them that reading your paper is worthwhile. Why is answering your research question important? What kind of decisions will be better informed if the decision maker learned about the results from this project?

Learning Outcomes:

- LO-1: Develop the ability to define a research problem: Formulate research questions and hypotheses that are measurable, well-defined, address the overall problem, are directly related, and reflect the scope of the problem
- LO-4: Develop the ability to effectively communicate research results both written and orally.
- CBA LO-1A: Communication - Develop the ability to convey information and ideas effectively in professional business reports.
- CBA LO-2: Decision Making and Critical Thinking - Have the ability to think critically when evaluating decisions.

Important Elements of an Introduction:

1. *Clearly state your research question / the purpose of your paper:* This should be done very early in the introduction, but probably not the first sentence or first paragraph. Your audience will not want to continue reading if it takes them too much time to figure out what the point is for your paper. What do you hope to accomplish? Who is your audience? That is who would use or be interested in your results? What decisions can be better informed by learning the outcome of your research project?
2. *Provide relevant background information:* Bring your audience from their world to where they need to be. Provide enough background information so that your readers understand the context and motivation for your paper and form their own informed opinion on the subject. Introduce your reader to findings from other papers in this field, and pay special attention to what still needs to be figured out or what conflicting evidence there is in the field, especially as it relates to the purpose of your paper. Your background information should also help the reader understand why further investigation into this topic is important or interesting.
3. *Communicate your message in a clear and meaningful way:* Organize your discussion to build an argument or tell a story. Build an argument for why issues in this field are important or interesting. Tell a story about what is known in this field and what needs further investigation. For each piece of

evidence, background information, or journal article cited, think about how it relates to the overall argument or story, and capture that in your narrative. Be careful to not let your introduction sound like a kid's letter to mom and dad from summer camp, "Then there is this... then there is this..."

4. *Ask all the relevant questions:* Have all of the relevant questions been asked? Are the questions focused on the essential issues? Think about the multiple problems, symptoms, and solutions you should try to identify and analyze.
5. *Literature review - Use existing evidence to motivate your research:* This is closely related to Point #2 above to provide relevant background information, but it concerns specifically citing other journal articles. In some written work, the literature review may be a separate section, and in others the literature review is part of the introduction, and which approach is taken is often the writers choice. For the purpose of the BUS 230 final project, we will include the literature review as part of the introduction.
 - Review relevant literature that puts your research question into context with previous research. The literature should help provide background information that helps your readers understand the issues in this field, what is currently known and unknown, and how your purpose is related to others' work.
 - Your literature review also has the purpose to help motivate your work. Other papers may have suggested that work along your purpose is important. Taken together, multiple papers may have evidence which conflicts with one another, suggesting further investigation may be needed for decision makers in your audience. Consider whether there is a case for replicating an analysis similar to another study, but for your specific population.
 - Your literature review should be *telling a story* about what is known and not known in this field, citing other research papers provides examples for the story. Think about the overall story, or overall point, that you are trying to make with your literature review. Think about how each paper you cite is related to that larger purpose.
 - Use a simple citation procedure like Lastname (YEAR). Example, "Herro and Murray (2010) find that uncertainty...." Details about the journal title, article title, and authors full names can be found in the bibliography.
6. *Introduce your reader to how you answer your research question - and justify it:* Most of these details should be put in your methodology section, but still, by the end of the introduction your reader should have a basic idea for how you plan to answer your research question. Consider including the population, the use of a survey, and a general description of the types of questions in the survey.
7. *Communicate effectively* by not distracting the reader with grammar and spelling errors. Writing is professional and follows common rules for reporting research, i.e. sources are cited correctly, quotes used appropriately.

Length: There is no length requirement for the introduction. It is most important that you write an introduction which meets the above expectations. Well written introductions sections will usually be between 3 and 5 pages, double spaced.

Research Paper: Methodology

Purpose: The methodology section is the second section of your research paper, following the introduction. The purpose of the methodology section is to explain with a significant level of detail, how you will be answering your research question.

Learning Outcomes:

- LO-3: Interpret data using statistical analysis.
- LO-4: Develop the ability to effectively communicate research results both written and orally.
- CBA LO-1A: Communication - Develop the ability to convey information and ideas effectively in professional business reports.

Important Elements of a Methodology Section:

1. *Population and sample:* Describe your population of interest and include in your description a justification for why this population is appropriate given your research question, and more largely, the purpose of your research project as you describe in your introduction. Then describe how will you be selecting your sample, and be sure it is clear that your sample represents your population.
2. *Survey and variables:* What variables will you be collecting from your sample? In your case, your variables will be the answers to your survey questions, so you should include your entire survey in the appendix at the end of your paper (include this appendix in your initial submission of your methodology section). Items in an appendix do not need to be discussed in excruciating detail, but they should have general explanations in the paper. Describe the type of variables you will be collecting. For example, you may have one or two sentences describing that you will be collecting data on academic performance, including measures of cumulative GPA, semester GPA, and progress in the program as measured by the number of credits students' have accumulated. You do not need to describe in so much detail which numbered questions in the survey correspond to which variables.
3. *Describe analysis of the variables:* What will you do with the data you collect to answer your research question? Will you compare averages from two or more groups? Will you look for relationships between two or more variables? In your description, be clear how the analysis answers your research question, or subset questions related to your larger research question. The level of detail needed here varies. At a minimum, a reader with basic understanding of statistics should be able to read this section and be able to figure out what statistical tests could be used to conduct this analysis. At a maximum, you could give your reader enough details so that he or she can *exactly replicate* your analysis.

Be careful to keep this part of your methodology well organized. Do not make it sound like a list, or letter to mom from summer camp, "Then we did this.. then we did this.. etc." Organize your analysis around themes. What sub-questions of your research question are you addressing? For example, first you might look for a relationship between academic engagement and academic performance. Then you may look for a difference in academic engagement between subgroups of your sample, like between males and females, between freshman and upper classes, etc. Then you might look to determine if there is a relationship between academic engagement and parental influences, etc. Keep your section

organized around each of these themes, and when as you begin discussing each theme, describe why you examining this theme. Bring this justification back to the purpose of your research project.

4. *Keep your paper connected:* Remember, this is the second section of your research paper, following the introduction section. Your paper should read like one unified paper, not two separate papers stapled together. Make sure your discussion of your analysis is consistent with your purpose laid out in the introduction.

Length: There is no length requirement for the methodology. It is most important that you write a methodology which meets the above expectations. Well written methodology sections will usually be between 3 and 5 pages, double spaced.

Research Paper: Results Section

Purpose: The results section is the third section of your research paper. Here you present your statistical findings. In the introduction section (first section of your paper), you discussed what the purpose of your research was. What do you intend to discover? What question will you attempt to answer? In the methodology (the second section), you discussed how you would achieve this purpose. The purpose of the results section is to fulfill the promise you made in the introduction section, reporting on the outcome from following the procedure in the methodology section.

This section is one of the most important sections of the paper to your audience or client. The whole reason you conduct a research project is to obtain the *new knowledge* that you are reporting here.

Learning Outcomes:

- LO-3: Interpret data using statistical analysis.
- LO-4: Develop the ability to effectively communicate research results both written and orally.
- CBA LO-1A: Communication - Develop the ability to convey information and ideas effectively in professional business reports.

Important Elements of a Results Section:

- *Keep it connected!* Remember, this section is the fulfillment of promises made in the introduction section. Describe results that answer the questions you said in your introduction that you were going to answer. Also, keep it connected to the methodology section. In that section, you reported how you would go about finding the answers you sought. The results section describes the results from the investigation you described in the methodology.
- *Tables and graphics:* You will likely need to present sets of results in tables or charts. Keep the following in mind:
 - Tables and figures should be *purposeful*. The results presented in any figure or table should be important, answering or resolving a specific aspect of what you said in the introduction that you set out to do.
 - Regarding *purposeful* tables and figures, include results that benefit from being presented in a table or chart. One or two simple statistics may not need to be presented in a separate table or figure, but might instead just be described in the text of a paper.
 - Tables and figures should only contain information that discuss in your paper. Do not include statistics or results that you make no mention of in the text of your paper. Do not copy and paste SPSS tables into your paper.
 - Tables should be easy to read. A reader should be able to glance at it and understand the main result.
 - Tables and figures do not replace text. Even if the reader wants to completely ignore your tables and figures, the text of the paper should make sense and include all the important messages and results described in plain English.

- *Plain English step of the hypothesis step:* That final step of the hypothesis testing procedure is an important one. Make sure those statements come out clearly in the paper after you presented the results of a statistical test. Choose your wording carefully so that these statements are easy to understand.
- *Tell a story:* Be careful to keep your results section well organized. The same advice as applied to the methodology applies here: Do not make it sound like a list, or letter to mom from summer camp, “Then we did this.. then we did this.. etc.” Organize your analysis around themes. What sub-questions of your research question are you presenting results for? Keep your section organized around each of these themes. Keep the organization similar to your methodology section.

Length: There is no length requirement for the results. It is most important that you write a results section which meets the above expectations. The results section may be the longest section of your paper. It may exceed 10 pages. If you conducted a number of statistical analyses and have a number of tables, it can take many pages to discuss these results in your text, and display the tables and figures in your paper.

Research Paper: Discussion / Conclusion Section

Purpose: The purpose of this final section of your paper is to answer what the findings in the result section mean. Present the conclusions you can draw concerning the population that you identified in the introduction section, following up carefully on the results that you presented in the results section.

Learning Outcomes:

- LO-3C: Interpret data using statistical analysis: Formulate conclusions and recommendations based upon the statistical results.
- LO-4: Develop the ability to effectively communicate research results both written and orally.
- CBA LO-1A: Communication - Develop the ability to convey information and ideas effectively in professional business reports.
- CBA LO-2: Decision Making and Critical Thinking - Have the ability to think critically when evaluating decisions.

Important Elements of a Discussion / Conclusion Section:

- *Take-away statement:* In the introduction, you should have clearly communicated a single-sentence purpose or question. The conclusion section should clearly communicate the answer. Based upon the results that you reported in the previous section, what is the overall message that your reader should take away?
- *Discuss qualifications / weaknesses:* Be specific what circumstances or populations that your conclusions can reliably apply to. Be open about shortcomings that you cannot answer definitely with your results.
- *Interpretations / Explanations:* Provide possible interpretations or explanations for your results. Discuss meaning behind the results, do not just regurgitate the results.
- *Connect to the introduction:* Make it clear that your discussion is addressing the issues you presented in your introduction.
- *Connect to existing work:* You cited other work in your introduction. Discuss how your results or interpretations agree or disagree with previously published work.

Length: There is no length requirement for the conclusion. Be sure that you cover the expectations above, and be sure that you cover all the important issues that are presented in your results section, and that you said you would present in your conclusion section. This section is typically between 1 and 4 double-spaced pages.

Final Paper Rubric

The *content* of your final paper and presentation will be evaluated according to the following rubric:

Introduction Section			
Trait	Below expectations (C,D,F Level)	Meets Expectations (B-BC Level)	Exceeds Expectations (A-AB Level)
Background information. Provide enough necessary background information to understand the purpose and appreciate the importance of the paper, without providing unnecessary details.	Background is insufficient to understand the purpose of the paper or appreciate its importance <i>or</i> background information is significantly beyond what is necessary.	Background is sufficient to understand the purpose and importance of the paper, with no more than a few missing details or extra information.	Background is sufficient to understand the purpose and importance of the paper.
Relevant literature is cited. Cite peer-reviewed literature that both provides a background for what is known on the topic, and allow the literature to motivate the paper.	Citations fail to provide sufficient background and/or they fail to motivate the paper.	Citations provide sufficient background, but they fail to motivate the paper.	Citations are cited to provide sufficient background, and they motivate the paper.
Research question is clearly stated and is sufficiently narrow, well-defined, and measurable.	The research question is unclear by the end of the introduction.	A measurable research question is clearly stated, but the specific research question lacks motivation.	A measurable research question is clearly stated and it is a natural culmination of the background information and motivation.

Final Paper Rubric (continued)

Methodology Section			
Trait	Below expectations (C,D,F Level)	Meets Expectations (B-BC Level)	Exceeds Expectations (A-AB Level)
<p>Data collection. Describe your target population, your sampling procedure, and your survey instrument, in a such way that is consistent with your specific research question, and with enough detail so that a reader could replicate your work.</p>	<p>Some of the descriptions of the population, sample, and/or survey are not clear.</p>	<p>The descriptions of the population, sample, and survey are clear, but perhaps not in sufficient detail to replicate the project.</p>	<p>The population, sample, and survey are described in a simple fashion and in enough detail so that the study could be replicated by a reader.</p>
<p>Variables. Describe your variables, the scale of measurement, and explain what comparisons or associations will be made (this is your methodology). Make it clear in your description how this analysis answers your research question.</p>	<p>The methodology lacks clarity or details to understand how it addresses the research question.</p>	<p>The methodology is clear and lacks at most a few details to understand how it addresses the research question.</p>	<p>The methodology is clear and it exactly addresses the research question.</p>

Final Paper Rubric (continued)

Results Section			
Trait	Below expectations (C,D,F Level)	Meets Expectations (B-BC Level)	Exceeds Expectations (A-AB Level)
<p>Statistical Method: Report the outcome of your statistical analysis, highlight findings, and report your conclusions in plain English. Choices for statistical tests should be appropriate for your research question and for the data you use.</p>	<p>Statistical tests are not appropriate and/or the introductions to the tests or discussions of conclusions or missing or incorrect.</p>	<p>Statistical tests are adequately introduced and their conclusions are correct and clearly discussed, with at most a few errors or omissions.</p>	<p>Statistical tests are adequately introduced and their conclusions are correct and clearly discussed.</p>
<p>Organization: Organization should be meaningful, have smooth transitions, and be consistent with other sections in the paper.</p>	<p>Organization of results is unfocused or unmeaningful and/or transitions are lacking.</p>	<p>Most transitions are smooth and organization of results is meaningful and consistent with other aspects of the paper.</p>	<p>Transitions are smooth and organization of results contributes to understanding the purpose and outcome of the research.</p>
<p>Tables / Figures: Tables and figures should be professionally presented, easy to understand, and clearly contribute to the purpose of the research.</p>	<p>Tables and figures are not clear and/or their message does not clearly address the purpose of the research.</p>	<p>Tables and figures are professionally presented and are easy to understand.</p>	<p>Tables and figures are professionally presented, easy to understand, and contribute to the reader's understanding of the outcome of the research.</p>

Final Paper Rubric (continued)

Conclusion Section			
Trait	Below expectations (C,D,F Level)	Meets Expectations (B-BC Level)	Exceeds Expectations (A-AB Level)
<p>Conclusion / Discussion Summarize the study's most important findings and describe the study's weaknesses and/or what questions remain unanswered. The conclusion should follow naturally from the results section and explicitly address the research question.</p>	<p>The conclusion lacks significant detail of the study's findings, weaknesses, or shortcomings and/or the discussion is unrelated to other parts of the paper.</p>	<p>At most only a few details of the study's findings, weaknesses, or shortcomings are discussed and it ties in with the rest of the paper.</p>	<p>There is adequate discussion of the the study's findings, weaknesses, or shortcomings, and it ties in with the rest of the paper.</p>

Rubric Describing Expectations for Written Communication

The previous rubric largely presents the expectations for the *content* of the final research project report. The following rubric is a College of Business Administration common rubric that is used evaluate formal writing *in all of our courses*. Rather than addressing the specific content, this rubric is used to assess the *quality of the written communication*.

Trait	Below Expectations (C,D,F Level)	Meets Expectations (B-BC Level)	Above Expectations (A-AB Level)
Purpose and audience is addressed	Demonstrates minimal attention to purpose and audience: purpose is not clear to reader, or writing is inappropriate for audience.	Demonstrates an awareness of purpose and audience: purpose is generally clear to reader and audience is addressed in a generally acceptable manner.	Writing consistently: maintains focus on purpose and appropriately addresses audience.
Organization of ideas and content is logical	Organization of ideas and content is ineffective and/or unfocused: paragraphs are not coherent and/or transitions are lacking.	Organization of ideas and content contributes to understanding: Paragraphs contain coherent ideas; transitions are used between most ideas.	Organization of ideas and content clearly create understanding: Paragraphs contain coherent ideas which are effectively connected with transitions. Writing is very focused and concise, with clear introduction and conclusion.
Content/ideas are developed	Content is used to identify only ideas that are obvious.	Content is used to explore ideas.	Content is used to convey depth of ideas.
Sources or evidence support ideas	Uses minimal evidence to support ideas and/or does not cite sources.	Uses evidence to support ideas and/or cites sources but some inconsistencies exist.	Uses evidence to thoroughly support ideas and consistently cites sources appropriately.
Genre or disciplinary rules are followed	Use of important conventions is inconsistent.	Demonstrates consistent use of most important conventions particular to a specific discipline and/or writing task(s).	Demonstrates consistent use of all conventions particular to a specific discipline and/or writing task(s).
Grammar, spelling and syntax is correct	Meaning of language is impeded due to errors.	Language has few errors.	Language conveys ideas succinctly and is nearly error free.

Final Project Presentation

Purpose: The research process is not complete without dissemination. Discovering or creating new knowledge is useless without sharing the knowledge with others. One way to disseminate research is to write a paper and share with others. Often stakeholders in your research project, including managers, clients, co-workers, or other researchers, will also expect you to present your research project to them. Presenting your work allows for a productive, interactive experience with your audience that circulating a paper cannot replicate. Your audience can ask you questions about your work, suggest ways to improve your research, or even suggest other research projects to conduct.

Learning Outcomes:

- LO-4: Develop the ability to effectively communicate research results both written and orally.
- CBA LO-1A: Deliver effective oral presentations

Expectations for Project Presentations

- Time limit: Stay within a 10-12 minute window.
- All your group members should present, and be given roughly equal time. In professional situations it may be best to have one or two people do the whole presentation, but for the purposes of this class I want to give you all a chance to work on your presentation skills.
- Your presentation does not need to include every detail that you include in your paper. With a limited amount of time, you will have to choose the most important aspects of your paper to include in your presentation. There may be literature you cite in your paper that you do not include in your presentation, and there may even be some statistical analysis that you do not include in your presentation. Your presentation should still be complete, and include the following aspects:
 1. **Introduction / Literature Review:** Clearly state your research question and sell your research project. By this, I mean convince your audience that this is an interesting topic, and that the work you are doing makes important steps at discovering something new in this field. In this process, you should include cite some literature that demonstrates what is already known about your topic, and use this to help motivate your work.
 2. **Methodology:** Explain how you are going to answer your research question. What is your population? How do you collect data? What survey questions do you ask. What variables do you collect? What kinds of comparisons or associations are you going to look for in your variables. Keep this discussion focused on your research question. Describe how your analysis is going to help answer questions related to your main topic.
 3. **Results:** Describe and illustrate (using graphs or tables) your results. Describe what statistical tests you ran, what the results were, and what conclusions do you draw from this. Bring your results back to your research question. What did you find was the answer? Keep this section organized around themes related to your research question; do not report an organized list of statistical test after statistical test. Keep the discussion focused on your project idea. What does each test, graph, or table, help you learn regarding your research question.
 4. **Conclusion / Discussion:** Answer some of the following questions: What did you learn? What are some of the weaknesses of your project? What questions related to your main point are left

unanswered by your research project? Is there a need to do further research on this area? Does your paper suggest another research question as the next step in advancing knowledge in this field?

Other Advice:

1. **PRACTICE! PRACTICE! PRACTICE!** Practice your presentation multiple times. Fortunately you work in groups, so you can practice your individual roles in front of one another. Make sure in your practice presentations that you stay within the time limit and you follow the advice in this document.
2. *Physical delivery:* Make eye contact with individuals in your audience. This means you should not be looking down at your notes and not looking at the overhead screen. Make sure you look and feel comfortable concerning your posture, gestures, and mannerisms. This comes with PRACTICE!!
3. *Verbal delivery:* Be sufficiently audible, use some expression in your voice, and go at a pace that is not too slow, but not too fast to understand. This comes with PRACTICE!!
4. *Visual aids:* Use visual aids that are professional, appropriate for the audience and content, effective, and promote audience interest. You may use PowerPoint slides (or other software if you like) or create handouts if you like. Neither of these is necessary, but some kind of visual aid is required. Most important is that these visual aids help the audience keep their attention and/or understand or remember particular points and results.
5. *Everyone participate:* The entire group is responsible for building the whole presentation. Still, the group should divide the speaking time evenly among all the group members. When switching to another person, before the presentation proceeds, the person should introduce himself or herself.
6. *Everyone is responsible for everything:* The entire group is responsible for the entire presentation. Everyone should have every part of the presentation prepared. This allows you to stay engaged in the conversation, even when you are not the main presenter. Also, unforeseen circumstances could arise in which one or more members is not able to give the presentation. The remaining group members are still responsible for giving a full and effective presentation.
7. *Everyone is part of the whole presentation:* Be mindful that if you are in front of the room, you are part of the presentation even if you are not speaking. Model the behavior you would like to see in your audience: Be interested and engaged, keep eye contact with the speaker.
8. *Give each other feedback:* Familiarize yourself with the expectations in this document, then as you practice your presentations with your group members, share with them aspects that they did well and aspects they can work on to improve.

Final Presentation Rubric

The College of Business Administration has a common rubric to evaluate *oral presentations* in all of our courses that we use to set expectations and assess student learning throughout the college.

Trait	Below expectations (C,D,F Level)	Meets Expectations (B-BC Level)	Exceeds Expectations (A-AB Level)
Verbal delivery achieves purpose. Language, voice, and pace are appropriate for audience.	Language is inappropriate for the audience; and/or voice is inaudible or lacks expression; and/or pace is halting or too fast to understand.	Language is appropriate for the audience; and voice is generally audible with some expression; and pace is generally understandable.	Language is appropriate for the audience; and voice is always audible and appropriately expressive; and pace flows and maintains interest.
Physical delivery achieves purpose. Posture, gestures, mannerisms, and eye contact promote audience interest.	Delivery detracts from the presentation and/or speaker appears uncomfortable.	Delivery makes the presentation understandable and speaker appears comfortable.	Delivery makes the presentation interesting and speaker appears confident.
Use of visual aids helps deliver information/ideas. Visual aids are professional, effective, and promote audience interest.	Visual aids are sometimes irrelevant and/or fail to convey information which improves understanding of the content.	Visual aids are relevant and convey information which improves understanding of the content.	Visual aids are relevant, clear, and generate interest and understanding of the content.
Logical organization of ideas/content. Sections are ordered properly and flow naturally with transitions. Presenters should stay within time window.	Organizational sequence is not clear, the presentation feels disjointed, or the presentation was outside time window.	Organizational sequence is clear with only minor transitional problems, and the presentation was within the time window.	Organizational sequence is clear and creates a cohesive presentation, and the presentation was within the time window.
Content and ideas are developed.	Information is insufficient to support the ideas presented.	Information is generally sufficient to support the ideas presented.	Information supports the ideas presented and lends credibility to conclusions.
Central message is conveyed.	No conclusions are presented.	Conclusions are presented, although the central message lacks focus or is not compelling.	Conclusions make a clear and compelling central message of the presentation.