

Instructor Information

James Murray, Ph.D.
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Office Phone: 608-785-5140

Meeting Time / Location

Section 6: 12:40 PM - 2:05 PM, Tuesday and Thursday, Wing Communication Center Room 17
Section 7: 2:15 PM - 3:40 PM, Tuesday and Thursday, Wing Communication Center Room 17

Course Resources

Textbook: William G. Zikmund, Barry J. Babin, Jon C. Carr, and Mitch Griffin, Business Research Methods, 9th Edition, 2013.

Class website: <http://www.murraylax.org/eco230/fall2018>. Most of the material handed out in class will be posted on the class website.

Canvas: Grades will be posted on Canvas, and some quizzes and class material may be administered through Canvas. Most of the class material will be posted on the class website.

Catalog Description

The study of the scientific method as used in business and economics research, beginning with the identification of the problem and culminating in the final report. Analysis of the reliability and validity of data, effectiveness of presentation, and a critical study of the validity of conclusions. Prerequisites: ENG 110 or ENG 112; STAT 145; CBA major or CLS economics major.

Course Goals

The goal of this course is to give you practice using quantitative and qualitative tools to conduct research useful in a business, government, or nonprofit setting. To accomplish this, we will practice conducting pieces of research projects with real-world scenarios and we will analyze data and produce professional business research reports for real local clients.

Some of the most important aspects of the research project that we will cover in depth include:

- Constructing a well defined question or problem to define our research project.
 - How to make ethical considerations in research design and reporting.
 - How to construct surveys to result in unbiased, reliable, and useful information.
 - How to use statistical methods and data visualization to analyze data.
 - How to use writing, presentations, and data visualization to communicate research.
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Course Learning Objectives

1. Develop the ability to define a research or overall business problem.
 - (a) Formulate research questions and hypotheses that are relevant and reflect the scope of the problem.
 - (b) Formulate research questions and hypotheses that are measurable, well defined and directly related to one another.
2. Recognize and use the appropriate techniques to collect and use survey data to address a research problem.
 - (a) Recognize the ethical responsibilities of conducting human subjects research.
 - (b) Compare the advantages and disadvantages of different survey methods.
 - (c) Identify sources of respondent and administrative error and develop the ability to construct and administer a survey instrument that minimizes these errors.
 - (d) Recognize the implications of probability vs. non-probability sampling on the interpretation of primary data.
3. Interpret data using statistical analysis.
 - (a) Identify and compare the types of measurement scales used in conducting research.
 - (b) Analyze the scale of measurement to determine the types of descriptive and inferential statistics that can be used to interpret data.
 - (c) Formulate conclusions and recommendations based upon statistical results.
4. Develop the ability to effectively communicate the purpose and nature of one's research both written and orally.
5. Develop the ability to critically evaluate research to identify limitations, errors, and biases.

CBA Curriculum Objectives

What follows is the subset of CBA Curriculum Objectives that we address in this course.

- Communication Goal: Our students will be able to convey information and ideas effectively.
 - Students will convey information and ideas in professional business reports
 - Students will convey information and ideas in oral presentations.
 - Decision Making and Critical Thinking Goal: Our students will be able to think critically when evaluating decisions.
 - Students will evaluate alternatives and understand the ramifications of those alternatives within a given business context.
 - Social Responsibility Goal: Our students will be prepared to be socially responsible citizens.
 - Students will demonstrate the ability to consider the effects of business decisions on the entire social system.
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Schedule of Topics

Unit 1: Introduction to Data Analytics (4 Weeks)

- Module 1: Getting Started (1 Week)
 - Why data analytics is important, scale of measurement
 - Basic data visualization in Excel
- Module 2: Data Visualization (2-3 Weeks)
 - Best practices; Improve Excel visualizations, visualization with Tableau
 - Data visualization project - presentations to coaches, one page reports

Unit 2: Programming in R for Data Analytics (5 Weeks)

- Module 3: Understanding data (1.5 Weeks)
 - Handout tutorials - Loading data, viewing data, basic aggregation, identifying scale of measurement using R data types
 - Descriptive statistics - Means, interpolated medians, tables for factor variables, proportions with binary variables
 - Datacamp courses - Introduction to the Tidyverse, Introduction to Data
- Module 4: Data Visualization (3.5 Weeks)
 - Introduction to the grammar of graphics
 - Visualizing mean and median with bar plots
 - Datacamp course - Introduction to GGPlot2
 - Assignment - Data visualization on project data sets

Unit 3: Survey Research (3 Weeks)

- Module 5: Ethical considerations regarding research participants (1/2 Week)
 - Assignment - National Institute of Health (NIH) tutorial
- Module 6: Research proposal, Requests for Proposals (RFPs) case study (1/2 Week)
- Module 7: Constructing questionnaires and limiting potential for bias (1 Week)
 - Assignments - Fixing surveys, Case study survey
- Module 8: Error and bias in survey research (1 Week)

Unit 4: Final Projects & Communicating Research (2 weeks)

- Module 9: Final Project Datasets and Clients
 - Module 10: Effective presentation design
 - Final report and presentations - Last week of class and final exam week
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Office Hours

I am available for office hours **by appointment with a minimum of only one hour notice**. You may schedule a 15 minute appointment by visiting <https://murraylax.youcanbook.me>. The blocks of time that I am available each week vary and are kept up to the minute on the YouCanBook.Me online scheduler. Additional walk-in office hours will be added as necessary, especially during exam weeks and weeks with significant homework deadlines. My typical weekly availability is given below.

8:30 AM - 2:30 PM Monday, Wednesday, Friday Visit <https://murraylax.youcanbook.me>
9:30 AM - 12:00 PM Tuesday and Thursday to make an office hours appointment.

Be prepared for your office hours appointment. Have your questions written down. Be able to demonstrate that you have taken class notes and read the textbook on the topic of your questions.

When scheduling office hours, please schedule only one 15 minute block. Under normal circumstances, you **should not schedule two or more consecutive blocks** in an effort to create a 30 minute or longer appointment. The 15 minutes will be sufficient if you have prepared for the appointment, you have completed the required and suggested work, and you are attentive in class. Students that have exceptional circumstances that may warrant a longer appointment include those conducting independent studies or outside research with me, or those who missed more than one consecutive class period for exceptional circumstances such as family emergencies or active military obligations. If you need a longer appointment, please discuss it with me ahead of time.

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.

OFFICE HOURS SATISFACTION GUARANTEED!

I guarantee that coming to office hours to ask questions on material you do not completely understand will increase your grade in the class. If you come to office hours and still get questions wrong on the exam about the topic we discussed, I will refund those points! This guarantee is subject to the following conditions:

1. Refund points are good for up to two topics on each exam, and up to a total of 10 percentage points per exam.
 2. You and I must agree in writing using the form at the end on the syllabus that the topic that is guaranteed. On this form we both agree that I have explained the topic sufficiently and that you have acquired a good understanding from our discussion.
 3. You must have attended class when the topic was initially taught.
 4. Only three guarantee forms may be filed before each exam.
 5. Only one guarantee form may be filed on a single day. Therefore, filing two or three guarantee forms before an exam will require at least two or three separate office hours visits, respectively.
 6. After the exam, if you get questions wrong that were guaranteed, it is your responsibility to recognize this and present your copy of the guarantee form to notify me you should get the points refunded.
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Case Studies

- Data visualization project: You will work in groups of four for this assignment, produce a unified presentation where you all have a distinct message and data visualization, and finally each member will produce an individual one page report on their own distinct message.
- Annotated bibliography: You will work in groups of two on a case study where you produce a research proposal (see next item). The annotated bibliography is a way to search for and organize published information that will be useful to use in your research proposal. Each member of your group will prepare their own annotated bibliography to submit for a grade, where each submission has entries unique from the other group member.
- Research proposal: You will work in groups of two for this writing assignment. The case studies are fictional, but realistic, requests for proposals (RFPs) to conduct survey research for a client. Individual researchers or research firms respond to RFPs with a proposal to conduct the research and include a budget to request funds. The research proposals provide details as to what specific question the research project will answer, how valuable will that knowledge will be to the funding agency, what variables will the researchers collect, and how the researchers will analyze the variables to answer the research question.

Client Projects

Late in the semester, you will work in groups of 3-4 on a client project. Depending on availability, the client may be a real client from the La Crosse area or a fictional client. You will be provided with a broad description of the client's goals and a complete dataset. You will be required to analyze the data, produce a professional business research report, and give a face-to-face oral presentation with your client. The client project assignments include:

- Final report. The final report is due by 7:00 PM on Wednesday, December 19.
- Client presentation: You will present your findings in an authentic business meeting style. Rather than presenting to the whole class in the front of a classroom, you will give a presentation to your client and instructor in a conference room on campus that is equipped with a computer and a projector or large flat-panel wall-mounted monitor.

Client presentations will 20 minutes long and be held on the last day of class or during the final exam time. You only will participate / attend your own group's presentation with the client. You will be assigned one of the following times based on the availability of your client. All these times are during normal class times or required final exam times.

Section 6 (Meets at 12:40 PM T H):

- Tuesday, December 11: 12:40 PM, 1:10 PM, 1:40 PM
- Friday, December 14: 4:45 PM, 5:15 PM, 5:45 PM, 6:15 PM

Section 7 (Meets at 2:15 PM T H):

- Tuesday, December 11: 2:15 PM, 2:45 PM, 3:15 PM.
 - Monday, December 17: 7:45 AM, 8:15 AM, 8:45 AM, 9:15 AM
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In-Class Exercises and Quizzes

There will be many announced and unannounced in-class exercises and quizzes given throughout the semester. These are based on class lecture, prerequisite knowledge, assigned reading, or other suggested work, and are designed to communicate learning expectations and give you quick feedback on how well you are achieving these. Classes will begin with your questions so that you can resolve any problems with assigned work before the quiz begins.

Homework Assignments

There will be some graded homework assignments assigned during the semester. Assignments that are more substantial than others may be given double weight. Homework assignments worth double weight will be clearly indicated as such at the top of the assignment description.

Datacamp Courses

Datacamp (<https://www.datacamp.com>) is a commercial service that provides automated interactive online “courses” in data science and coding. You will be assigned several of these courses that cover introductory statistical programming using the R programming language. The service is provided for free to students in higher education. You will receive an email notification from `datacamp.com` to your UWL email address inviting you to create an account. Once logged in, you will see several courses assigned with due dates. Courses take approximately 4-6 hours to complete and you will be given one week to complete the courses when assigned. You do not need to complete the course all at once. You may log in and out and complete small amounts throughout the week.

Exams

There will be three 35 minute exams during the semester. The exams may be cumulative. The exams will be held in the last 35 minutes of class. The first 45 minutes of class on exam days will include new content, lecture, and in-class exercises.

- Exam 1: Tuesday, October 2, 2018
- Exam 2: Tuesday, October 30, 2018
- Exam 3: Thursday, November 29, 2018

I will provide a practice exam one week before the exam. For each exam, I will write two versions with questions similar in style, content, and expectations, and choose with a coin flip which becomes the real exam and which becomes the practice exam. I will not provide answer keys to the practice exams, but I am happy to help you with questions in class or during office hours.

Exams may require a calculator, so be sure to bring a calculator to class on exam days. You may use a basic or scientific calculator, but you are not permitted to use electronic devices with capacity to store information. Therefore, devices such as graphing calculators, mobile phones, tablets, and electronic translators are not permitted. If English is not your first language, you are permitted to bring a paper-back English translator/dictionary. You may not share calculators with other students.

Graded Coursework Response Time

I will return all graded work to you within two weeks of the due date, or before the next exam date if the work is relevant practice for the exam. Work that is turned in late may not be accepted, but if so, I may not be able to grade the work within the two-week time frame. Grades will be posted on the D2L gradebook on or before the date I return the graded work to the class. I will return graded coursework in compliance with FERPA regulations, such as in class or during my office hours. I will bring your graded coursework to class only once. If you are not in attendance when coursework is returned, it is your responsibility to make arrangements to pick your work.

Double Counting Work with Other Courses

No assigned work from this course may be used to also satisfy a requirement for another course. Such practice is often allowed in college courses when instructors from both courses give explicit permission and communicate with each other of the joint expectations for the student. I will not follow this practice in this course. Understand that submitting the same work in multiple courses without obtaining permission from both instructors is considered self-plagiarism; it is academic misconduct and it will be treated as such.

Grade Breakdown

Your final course grade is based on the following weighted average.

- Quizzes and in-class exercises: 15%
- Homework assignments / Datacamp tutorials: 15%
- Case studies:
 - Data visualization project: 10%
 - Annotated bibliography: 5%
 - Research proposal: 10%
- Client project:
 - Final report: 10%
 - Oral presentation: 5%
- Exams:
 - Exam 1: 10%
 - Exam 2: 10%
 - Exam 3: 10%

Grade Scale

94-100	A	77-81	BC
89-93	AB	70-76	C
82-88	B	0-69	F

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.

Grade Change or Extra Credit Requests

I evaluate and assign grades for a lot of work from a lot of students in multiple courses, so it possible or even likely I may make mistakes. It is appropriate and helpful to me if you keep track of your grades that I post to Canvas and notify me if I have made a mistake. **It is not appropriate to ask for grade changes or special extra credit opportunities after performing poorly on assignments or exams**, or not achieving a grade that you hoped to earn. These requests will not be granted. Know also that such requests to me and most any instructor reflect poorly on your professionalism, attitude, and priorities.

In the event that scores are low for an assignment or exam across most or all students I do reserve the right to increase every students' grade by the same amount or give an extra credit opportunity to all students. Please understand that such events are rare and will not happen in a typical semester. Please do not make requests for such grade changes or extra credit opportunities. I do see the full distribution of all the students' grades and I have over a decade of knowledge and experience of the historical performances of students on similar assignments and exams in my classes and with other instructors. I use this full range of information to determine when such changes are appropriate.

Submitting Late Work

Attendance is required to receive credit for graded work completed in class, including quizzes, in-class exercises, and exams. Late work will not be accepted except for extraordinary circumstances. If possible, you should notify me before a missed class or assignment deadline that you will not be able to complete the assigned work at the given deadline and we may agree on an appropriate accommodation. In the event of missing class or an assignment deadline due to illness or emergency, you should notify me as soon as possible afterwards so that we can make arrangements for you to make up missed work. **Late work cannot be accepted under any circumstances after I have returned graded work to the class or after answer keys have been circulated.** It is for this reason that is important to notify me as soon as possible any circumstance that makes it appropriate to submit work late.

Attendance

Full physical and mental attendance is expected for every class period. That means **you attend and are attentive** in every class, and you take responsibility for knowing any announcement or concept I describe in class. If you need to miss a class day or exam day because of illness or emergency you may be excused and arrangements can be made for you to make up missed work if you notify me as soon as possible after the missed class.

Eagle Alert System

This class will be participating in the UWL 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/studentssuccess/>.

Online Student Evaluation of Instruction (SEI)

The university conducts student evaluations electronically. Approximately 2 weeks prior to the conclusion of a course, you will receive an email at your UWL email address directing you to complete an evaluation for each of your courses. Electronic reminders will be sent if you do not complete the evaluation. The evaluation will include numerical ratings and, depending on the department, may provide options for comments. The university takes student feedback very seriously and the information gathered from student evaluations is more valuable when a larger percentage of students complete the evaluation. Please be especially mindful to complete the surveys.

Mandatory Reporter of Sexual Misconduct and Harassment

As an employee of the University of Wisconsin-La Crosse, I am a mandated reporter of sexual harassment and sexual violence that takes place on campus or otherwise affects the campus community. This means that if I receive detailed or specific information about an incident such as the date, time, location, or identity of the people involved, I am obligated to share this with UWL's [Title IX Coordinator](https://www.uwlax.edu/affirmative-action/) (<https://www.uwlax.edu/affirmative-action/>) in order to enable the university to take appropriate action to ensure the safety and rights of all involved. For students not wishing to make an official report, there are confidential resources available to provide support and discuss the available options. The contact in Student Life is Ingrid Peterson, Violence Prevention Specialist, 608.785.8062, ipeterson@uwlax.edu. Please see <http://www.uwlax.edu/sexual-misconduct> for more resources or to file a report.

Religious Accommodations

Per the [UWL Undergraduate Catalog](http://catalog.uwlax.edu/undergraduate/) (<http://catalog.uwlax.edu/undergraduate/>), “any student with a conflict between an academic requirement and any religious observance must be given an alternative means of meeting the academic requirement. The student must notify the instructor within the first three weeks of class (within the first week of summer session and short courses) of specific days/dates for which the student will request an accommodation. Instructors may schedule a make-up examination or other academic requirement before or after the regularly scheduled examination or other academic requirement.”

Students with Disabilities

Any student with a documented disability (e.g. ADHD, Autism Spectrum Disorder, Acquired Brain Injury, PTSD, Physical, Sensory, Psychological, or Learning Disability) who needs to arrange academic accommodations should contact The ACCESS Center (165 Murphy Library, 608-785-6900, ACCESSCenter@uwlax.edu) and meet with an adviser to register and develop an accommodation plan. In addition to registering with The ACCESS Center, it is the student's responsibility to discuss their academic needs with their instructors. You can find out more about services available to students with disabilities at [The ACCESS Center website: http://www.uwlax.edu/access-center](http://www.uwlax.edu/access-center).

Veterans and Active Military Personnel

Veterans and active military personnel with special circumstances (e.g., upcoming deployments, drill requirements, disabilities) are welcome and encouraged to communicate these to me, in advance if possible. For additional information and assistance, contact the [Veterans Services Office](http://www.uwlax.edu/veteran-services/) (<http://www.uwlax.edu/veteran-services/>). Students who need to withdraw from class or from the university due to military orders should be aware of the [military duty withdrawal policy](http://catalog.uwlax.edu/undergraduate/academicpolicies/withdrawal/#military-duty-withdrawal-university), <http://catalog.uwlax.edu/undergraduate/academicpolicies/withdrawal/#military-duty-withdrawal-university>.

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. This means it is not appropriate to send email requests which would require a reply within 24 hours to address, such as questions about work due within the next 24 hours.
- 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 make an office hours appointment.
- Always include a subject that is brief but still has sufficient detail so a glance at my inbox makes the purpose of the message apparent.
- Always include the course number (ECO 301) in the message.
- 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.

Academic Misconduct

Academic misconduct is a violation of the UWL Student Honor Code and is unacceptable. I expect you to submit your own original work and participate in the course with integrity and high standards of academic honesty. The UWL Student Honor Code can be found online at <http://catalog.uwlax.edu/undergraduate/academicpolicies/studentconduct/>. In the event a student is caught committing academic misconduct, I will pursue the harshest penalties allowed by Wisconsin state law as described in the UWS 14 Student Academic Disciplinary Procedures here, https://docs.legis.wisconsin.gov/code/admin_code/uws/14.

UWL Legal Obligations to Students

Many of the above legal obligations of instructors and the university are afforded to all UWL students in all their courses. You can see these at <https://www.uwlax.edu/info/syllabus/>.

Office Hours Guarantee

Name: _____

Date / Time: _____

General Topic: _____

Chapter / Reading Reference: _____

Describe specifically the concept that is guaranteed:

Student Signature

Instructor Signature

Student Copy

Office Hours Guarantee

Name: _____

Date / Time: _____

General Topic: _____

Chapter / Reading Reference: _____

Describe specifically the concept that is guaranteed:

Student Signature

Instructor Signature

Instructor Copy
