

Course Information

Title: Statistical Computing
Course #: BANA 5143 & BANA 6043
Sections: 001 & 002
Credit Hours: 2
Term: Spring 2019
Course Time: 1:00-4:50 PM Saturdays

Instructor Information

Instructor Name: Matt Risley
Email: rileymy@ucmail.uc.edu

Teaching Assistant Name: Akshay Singhal
Email: singhaay@mail.uc.edu
Office Hours: 12:00-1:00PM Saturdays

Communication Policy:

Students are encouraged to contact us at any time via email with any questions, concerns, etc. Please email Akshay and copy me. Questions are a critical part of learning and we welcome them. A response will be given within 48 hours in most cases (and often sooner).

Remember that a timely response is contingent on a timely inquiry. For example, it is unlikely you will receive an email response to a question written within 24 hours of an assignment due date.

Link to Pace



This course aligns with PACE, the Lindner College of Business platform for developing the *total* business professional.

P – Professionalism

- Enhance oral & written **communication**, express ideas clearly, logically and persuasively.
- Develop and practice **teamwork** skills through group projects and exercises. We will regularly work together in class to complete tasks and learn from one another's questions.
- Practice professional habits of punctuality, preparation, respect and participation.

A – Academics

- Develop foundational knowledge of core **business functions** and their interactions within firms. Many functions and strategy decisions within a corporation rely on data and analysis derived from use of statistical software such as SAS or R.
- Begin applying functional and cross-functional knowledge **to critically analyze business problems**. This course will marry programming with other functional knowledges, including finance and economics.

C – Character

- Learn and apply **leadership** techniques for project management (plan, brief, execute, debrief). This course has many concrete deliverables that will require project management skills.
- Build an understanding and initial skills of **managing diversity**, including understanding cultural differences, and challenges and opportunities of global business.
- Understand importance of **ethics and social responsibility** in business and personal settings. Data analytics always intersects with ethics. Conclusions drawn from data are as much a question of what you include as to what you exclude, both of which can dramatically alter those conclusions.

E – Engagement

- Build understanding of importance and practices of **networking** through interactions with business professionals and guest speakers.
- Develop awareness and appreciation of **involvement** in social organizations, community service, and professional group opportunities. This course will refer to online programming content, most of the which is created and maintained by the coding community.

Course Materials

Website

- <https://mrrisley.github.io/BANA6043>

Software

- SAS OnDemand for Academics:
http://www.sas.com/govedu/edu/programs/od_academics.html
- R: <https://cran.r-project.org/>
- RStudio: <https://www.rstudio.com/>
- Microsoft SQL Server 2014 Express with Management Studio Tools (free):
<https://www.microsoft.com/en-US/download/details.aspx?id=42299>

Course Description

This is a course on the use of computer tools for data management and analysis. The focus is on a few popular data management and statistical software packages such as SQL, SAS, SPSS, S Plus, R, and JMP although others may be considered. Data management and manipulation techniques including queries in SQL will be covered. Elementary analyses may include measures of location and spread, correlation, detection of outliers, table creation, graphical displays, comparison of groups, as well as specialized analyses.

Instructional Methods

The following course utilizes the Blackboard (Bb) Learning Management System to provide student-centered online learning that will enhance the teaching and learning process. Bb will primarily be utilized for assignment turn-in, grades, and announcements. For a guide to Bb, see <https://kb.uc.edu/kbarticles/blackboard-landing.aspx>.

Lecture materials will be available online through the instructor's website.

Other learning materials will be provided, such as SAS Web-based Tutorials and DataCamp.

Course Communication

University policy requires that the email set up in Blackboard is the primary means of communication. It is advisable that you use your UC email for this purpose and that you check it often. If you choose to change your email in Blackboard to a non-UC email it is your responsibility to ensure you check it frequently. Please see the attached Student Email Policy for more information:

http://www.uc.edu/content/dam/uc/infosec/docs/general/Policy_StudentEmail.pdf.

Course Policies

Course Structure

Changes to the syllabus, due dates, course requirements or grading requirements will be made as far in advance as possible. Due dates will be clearly marked in Blackboard and communicated in class. All assignments will be submitted via Blackboard.

Academic Integrity

As with all Lindner College of Business efforts, in this course you will be held to the highest ethical standards, critical to building character. Ensuring your integrity is vital and ultimately is your responsibility. To help ensure the alignments of incentives, the Lindner College of Business has implemented a "Two Strikes Policy" regarding Academic Integrity that supplements the UC Student Code of Conduct (see: http://www.uc.edu/conduct/Code_of_Conduct.html)

- All academic programs at the Lindner College of Business use this "Two Strikes Policy"; Any student who has been found responsible for two cases of academic misconduct may be dismissed from the College.
- All cases of academic misconduct (e.g., copying other students assignments, failure to adequately cite or reference, cheating, plagiarism, falsification, etc.) will be formally reported by faculty; and
- Students will be afforded due process for allegations as outlined in the policy.

Any instance or suspicion of academic misconduct will be reported to the Dean of the Lindner College of Business, and appropriate grade reductions for academic misconduct will be applied.

Disability

Students with disabilities who need academic accommodations or other specialized services while attending the University of Cincinnati will receive reasonable accommodations to meet their individual needs as well as advocacy assistance on disability-related issues. Students requiring special accommodation must register with the Disability Services Office.

<http://www.uc.edu/aess/disability.html>

Counseling Services, Clifton Campus

Students have access to counseling and mental health care through the University Health Services (UHS), which can provide both psychotherapy and psychiatric services. In addition, Counseling and Psychological Services (CAPS) can provide professional counseling upon request; students may receive five free counseling sessions through CAPS without insurance. Students are encouraged to seek assistance for anxiety, depression, trauma/assault, adjustment to college life, interpersonal/relational difficulty, sexuality, family conflict, grief and loss, disordered eating and body image, alcohol and substance abuse, anger management, identity development and issues related to diversity, concerns associated with sexual orientation and spirituality concerns, as well as any other issue of concerns. After hours, students may call UHS at 513-556-2564 or CAPS Cares at 513-556-0648. For urgent physician consultation after-hours students may call 513-584-7777.

Title IX

Title IX is a federal civil rights law that prohibits discrimination on the basis of your actual or perceived sex, gender, gender identity, gender expression, or sexual orientation. Title IX also covers sexual violence, dating or domestic violence, and stalking. If you disclose a Title IX issue to me, I am required forward that information to the Title IX Office. They will follow up with you about how the University can take steps to address the impact on you and the community and make you aware of your rights and resources. Their priority is to make sure you are safe and successful here. You are not required to talk with the Title IX Office. If you would like to make a report of sex or gender-based discrimination, harassment or violence, or if you would like to know more about your rights and resources on campus, you can consult the website www.uc.edu/titleix or contact the office at 556-3349.

Missed and/or Late Assignments and Assessments

Missing and/or late assignments and assessments are only permitted with 24 hour prior notice to the due date. If missing and/or late assignments become a chronic issue within the class, the instructors reserves the right to alter the policy on missing and/or late assignments and assessments, including penalties for missing and/or late assignments. The instructor also reserves the right to mark missing and/or late assignments or assessments as a “zero” at the time of grading.

Grading Policy

Your course grade will be determined under the following weighting system. The instructor reserves the right to alter the grading policy with advance notice to students.

Participation/Attendance	15%
Homework	20%
Assessments	20%
Midterm	20%
Final	25%

Your course grade, determined by the weighting schema above, will be scaled as follows:

A	93-100
A-	90-92
B+	87-89

B	84-86
B-	80-83
C	70-79
D	60-69
F	< 60

Assignments and Academic Integrity

All work turned-in for a grade for this course is **an individual effort only**. This means that you cannot consult other students, instructors, or persons for assistance in completing the work. You may only ask questions of and receive assistance from the instructor or teaching assistant.

Description of Assignments

- Participation/Attendance
 - This portion of your grade will be determined by in-class assignments. This portion can be upwardly adjusted for meaningful participation in the lecture.
 - In-class assignments assigned during class are due prior to the start of the following week's class.
- Homework
 - There will be a number of homework assignments that students will be expected to complete outside of class time. Homework assignments are due prior to the start of the next week's class.
- Assessments
 - At the beginning of each class, there will typically be a short assessment covering material in the prior class. These are meant to serve as a checkpoint for progress in the course, the student's understanding of the material presented thus far, and possible areas where more instruction is required.
- Midterm
 - The midterm will be given during the fourth week of class and will be a written assessment. The midterm will be cumulative to that point in the class, covering all material presented in the prior three weeks.
- Final
 - The final will be given during Week 6 and will be take-home, due by Week 7 at by our final scheduled class date, which is reserved for the final exam. The scope of the final is cumulative, and successful completion will require understanding of all material presented in the course.

Course Schedule

The instructors reserve the right to alter the course schedule, as necessary.

Class	Topics	Assessments	Deliverables
Week 1	Introduction to Programming and SAS Summary Statistics in SAS		
Week 2	Hypothesis Testing X-Y Scatter Plots Correlation	Assessment #1	Homework #1 In-Class Assignment #1

Week 3	Data manipulation in SAS Linear Regression SAS Macros	Assessment #2	Homework #2 In-Class Assignment #2
Week 4	SQL & PROC SQL Introduction to R	Midterm	In-Class Assignment #3
Week 5	R data manipulation Data summarization in R	Assessment #3	Homework #3 In-Class Assignment #4
Week 6	R data visualization Loops in SAS and R	Assessment #4	Homework #4 In-Class Assignment #5
Week 7			Final In-Class Assignment #6