

BAN 300 Foundations of Data Management

School of Business/Business Administration Department/Business Analytics
Spring 2023

Instructor Info

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Office: Luther Bonney 419, Portland Campus

Hours: Wednesdays 10:30 am to 11:30 am

Thursdays 1:30 pm to 2:30 pm. Starting week 2.

Office hours may be in person but will mostly be on Zoom.

Keep an eye out on the Announcements in Brightspace for any changes/cancellations to office hours.

Other times available by appointment, please send an email to set up.

Course Meetings

Online Asynchronous



[Academic Services & Policies](#)¹

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1. Course Information

1A. Course Description

Catalog Description:

Data Management is the art of acquiring data and preparing it for analysis. This course serves as the entry course for the Business Analytics major at USM and will provide students with hands-on experience extracting, tidying, analyzing data, and communicating results through reports and visualizations. Data management is a core skill for all business analysts that is highly valued by industry. Non School of Business students please see [enrollment policy](#) for eligibility.

¹ <https://mycampus.maine.edu/group/usm/common-syllabus>



Prerequisite(s): [MAT 210](#) (C- or higher) or other approved statistics course. See usm.maine.edu/school-of-business/stats for other approved statistics courses.

Co-requisite(s):

Credits: 3

Instructor note on Description:

This course is largely about the janitorial work performed in business analytics. You won't be able to impress your friends with what you learn but you will increase your own productivity immensely. You'll also become proficient with the R language, which is [fairly popular](#).

1B. Course Materials & Books

Required

- [Course notes for Data Management](#), Suleiman (free)
- Other readings may be provided in Brightspace

Supplemental

- [R for Data Science](#), Golemund and Wickham

Technology Requirements

- See the tools section in Brightspace for an invitation link to DataCamp. The link expires after 14 days so if you need me to generate a new one, please let me know.
- [R](#) and/or and R IDE one possible R IDE is [RStudio desktop](#) (recommended if you want to work without internet access, also free).
- See the “Computer Access”, “Latest Version of Web Browser”, “Brightspace Technical Requirements” section later in this document for information on Brightspace’s tech requirements.
- For Brightspace tech requirements, see the [Academic Services & Policies page](#)².

1C. Course Format

This course is asynchronous online. It is fairly technical and work intensive and you need an understanding of basic statistics.

During the normal weekly operation, I will be releasing material by Monday each week (unless Monday is a university holiday, when I will release by the following University meeting day) and all submissions will be due the following Sunday night at 11:59 pm, giving you normally one week to go through the material and submit the deliverables. There are exceptions to the due date, such as the first week, keep an eye out on announcements.

² <https://mycampus.maine.edu/group/usm/common-syllabus#treq>



1D. Learning Outcomes

Upon successful completion of this course, students will:

1. **Manipulate data** from a variety of sources.
2. **Transform** raw data into a format suitable for **analysis**.
3. **Analyze** and **visualize** data.
4. **Integrate** their analysis into beautiful reports
5. Gain **proficiency** with the **R** language

2. Coursework & Grading

2A. Grade Scale

100-93%	=	A	79-77%	=	C+
92-90%	=	A-	76-73%	=	C
89-87%	=	B+	72-70%	=	C-
86-83%	=	B	69-60%	=	D
82-80%	=	B-	Less than 60%	=	F

2B. Course Grade Breakdown

Assessment Name	Value
Tutorials (5 @ 5% each)	25%
Assignments (6 @ 9% each, lowest grade dropped)	45%
Self-Directed Learning Modules (3 @ 10% each)	30%
Total:	100%

2C. Assessment Descriptions & Requirements

Assessment is done through Tutorials, Assignments, and Self-Directed Learning Modules (SDL). Tutorials (DataCamp) are there as practice, and are graded based on effort, not necessarily correctness. If you complete at least 70% of the tutorial, you receive 100/100. 50-70% is a 70/100, 10-50% is a 50/100 and less than 10% is 0/100. Assignments are designed to be done during the week they are assigned. SDLs are much more involved modules. Assignments and SDL will have descriptions of how they are graded in the assessment descriptions in Brightspace.

2D. Final Examination/Final Project

There is no final exam. The final project will be two SDLs, see the course schedule below.



3. Class Schedule

Readings / Assignment Schedule **** (subject to alteration with notice) ****

The corresponding module deliverable submission date is shown in week. Modules end on a Friday and the deliverables will be due the Sunday after (two days after the Friday end date) at 11:59 PM. I have **bolded dates** that have at least one deliverable and **bolded the deliverables** as well.

Check Brightspace's calendar for more information.

Week (Due date)	Topics and Activities	Due
1-2 Release by: 1/18	Module 1: Introduction to Data Management Introduction to R.	Assignment 1 Tutorial 1 Due: 1/29/23
3 Release by: 1/30	Module 2: Exploring Data - I	Tutorial 2 Due: 2/5/23
4 Release by: 2/6	Module 3: Exploring Data - II	Tutorial 3 Due: 2/12/23
5 Release by: 2/13	Module 4: Communicating visually	Tutorial 4 Assignment 2 Due: 2/19/23
6 Release by: 2/21	Module 5: Creating Reports Presidents Day, University Holiday (2/20)	
7 Release by: 2/27	Module 6: Importing Data and Validation	Assignment 3 Due: 3/5/23
8 Release by:	Module 7: SQL	SDL Module 1 Due: 3/19/23



3/6		
	Spring Break March 13-17	
9 Release by: 3/20	Module 8: Tidy Data	Assignment 4 Due: 3/26/23
10 Release by: 3/27	Module 9: Open Data Last day to drop class with a "W" is 3/31	Assignment 5 Due: 4/2/23
11 Release by: 4/3	Module 10: Time Series Data	Tutorial 5 Due: 4/9/23
12 Release by: 4/10	Module 11: Web data	
13 Release by: 4/17	Module 12: Web Scraping	Assignment 6 Due: 4/23/23
14 Release by: 4/24	Work on Self Directed Learning Modules 2 and 3 Last day of classes is 4/28	
Finals Week	Work on Self Directed Learning Modules 2 and 3	SDL Modules 2, 3 Due: 5/7/23

4. Course-Specific Policies

4A. Attendance

This is an online asynchronous course. No attendance will be taken. However, you should follow the course on a weekly basis as material will be released each week.



4B. Late Work

Work submitted after an assignment due date, unless otherwise cleared by the instructor, will be penalized. **Late submission will be allowed with a penalty of 10% of the grade per day, until 5 days. After 5 days a zero will be given for the submission.**

4C. Inclement Weather Contingencies

(This section is from the USM template. I do not anticipate we will have a full week of cancellations. In the unlikely event that school is closed for a week I will be using this policy to reschedule).

From time-to-time USM will close the University due to inclement weather. When the cancellation is for an entire day, the class content will be made up at another time or through additional, outside of class, assignments.

When the school opens late or closes early, and the time selected is during the middle of class, we will still hold the class unless you are otherwise notified by me. Two examples:

- If class starts at 1pm, but the University is closing at 1:30pm, we will still have class unless you hear from me (keep an eye out on Announcements in Brightspace).
- If class starts at 1pm, but the University is opening at 1:30pm, we will still have class unless you hear from me (keep an eye out on Announcements in Brightspace).

4D. Additional Instructor Notes

Academic Integrity/Plagiarism

Everyone associated with the University of Southern Maine is expected to adhere to the principles of academic integrity central to the academic function of the University. Any breach of academic integrity represents a serious offense. Each student has a responsibility to know the standards of conduct and expectations of academic integrity that apply to academic tasks. Violations of academic integrity include any actions that attempt to promote or enhance the academic standing of any student by dishonest means. Cheating on an examination, stealing the words or ideas of another (i.e., plagiarism), making statements known to be false or misleading, falsifying the results of one's research, improperly using library materials or computer files, or altering or forging academic records are examples of violations of this policy which are contrary to the academic purposes for which the University exists. Acts that violate academic integrity disrupt the educational process and are not acceptable.

Evidence of a violation of the academic integrity policy will normally result in disciplinary action. A copy of the complete policy may be obtained from the office of Community Standards and Mediation, online at [Dean of Students Office website^{\[2\]}](#) or by calling and requesting a copy at (207) 780-5242.

Computer Access

Participants will need a reliable PC or a Mac with the latest version of a web browser. In addition, you will need a broadband Internet connection (DSL or faster). Below is a suggested list of recommended software you may need to access electronic resources for this course.



Latest Versions of Web Browsers

- [Mozilla Firefox^{\[6\]}](#) (Windows / MacOS) - Recommend
- [Google Chrome^{\[7\]}](#) (Windows/MacOS) - Recommended
- [Safari^{\[8\]}](#) (MacOS - Update through the App Store)

Note that Brightspace and many other web-based applications used in USM courses do not work well in Microsoft's web browser, Edge.

Brightspace Technical Requirements

D2L recommends having the latest version of whatever browser is being used on any computer or mobile device. Brightspace works very well on mobile Apple and Android devices via web browser. The Brightspace Pulse app in the Apple App Store and Google Play also allows you to receive notifications regarding your courses on your device.

Netiquette

Our text-based communication is vital in this course since it is the primary - and possibly only - way we will connect with each other. Please be careful and considerate in all your communications with each other and your instructor.

The online medium is poor at conveying tone. Consider what you are saying and remember that your intent might not be inferred by your readers (fellow students and instructors). Take a moment to re-read everything you write: assume that it will be taken in the worst possible light. And extend courtesy to others: assume the most charitable light possible. Both of these steps will make communication easier and far more civil. Violation of any of these policies may end up in having access to these technologies being revoked.

Student Data Retention

Your maine.edu account is issued to you for as long as you are a student of this or any other University of Maine System campus. There are various limits on how long IT can retain data you have stored through this account depending on which services you have used. Below are the major points, but we encourage you to [visit the UMS User Account Management website^{\[9\]}](#) for full details on maine.edu account policies.

Assignments and other work stored in Brightspace

Do NOT treat important academic work in old Brightspace courses as your sole copy. Each semester, all courses receive a fresh Brightspace page commonly referred to as a "shell." Course shells older than two years are automatically purged from the system, but sometimes instructors remove old course shells manually on their own. It is strongly recommended that you make backups of any work you have submitted to Brightspace before or shortly after your course ends. Especially if your program requires you to maintain a portfolio of work you have done.



Google Products

Your maine.edu account is also a fully functional Google Account with access to Gmail, Google Drive, and most of Google's other products. After leaving the university, either through graduation or simply not registering for courses, credit-earning students have 5 years before their maine.edu account is removed. The limit is 2 years for non-credit students. This includes files and email stored in Google's products using your maine.edu account. If this data is important to you, or if you need to retain it for a portfolio or future certification, you must make and maintain your own personal backups of these files. [Consider using Google Takeout^{\[10\]}](#) to backup this data prior to separating from the University.

Box & Others

If you are using Box through your maine.edu account, please be aware that your storage can only be maintained for one year after you have graduated, or otherwise separated from the university.

Course Evaluations:

At the end of each semester every student has the opportunity to provide constructive feedback on the course. It is important to me that you take the time to let me know your thoughts about the course. I use your feedback to make improvements in the course materials, assignments, and outcomes.

Withdrawal from the Course:

Last day to drop for 100% refund: Monday, January 30, 2023

Last day to drop with a grade of "W": Friday, March 31, 2023

For more information, review [USM's Add/Drop and Withdrawal Policies^{\[1\]}](#).

5. Academic Services & Policies

Below you'll find information for our most crucial student services and supports. For USM's most complete and current information on services available to students, as well as academic policies, see [The Academic Services & Policies Overview webpage³](#).

- **Request disability accommodations** | (207) 780-4706 | dsc-usm@maine.edu
- **Report Interpersonal violence** | (207) 780-5767 | usm.titleix@maine.edu
- **Report On-Campus Emergencies and Safety Concerns** | (207) 780-5211 or your local police agency.
- **Get academic help** | mycampus.maine.edu/group/usm/learning-commons1
- **Get technology help** | usm.maine.edu/computing/helpdesk
- **Meet with an Advisor** | usm.maine.edu/advising

³ <https://mycampus.maine.edu/group/usm/common-syllabus>



Services & Policies that Support You



Scan the QR Code to go to the [Academic Services & Policies webpage](https://mycampus.maine.edu/group/usm/common-syllabus)⁴

⁴ <https://mycampus.maine.edu/group/usm/common-syllabus>