Course Title: Foundations of Data Management
Number: BAN 300 - 001
Section Number: 23051
Course Meeting dates/times: Online Asynchronous
Course Meeting room: Brightspace

Instructor: Hirotoshi Takeda (he/him/his)   Office Location: Luther Bonney 419
Email: hirotoshi.takeda@maine.edu    Office Phone: 207-780-4315
Office Hours: Tuesdays 3:30 pm to 4:30 pm, Thursdays 11 am to noon, starting week 2
Zoom link: https://maine.zoom.us/j/9806057973
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 Materials & Books:
   Required:
   •  [Course notes for Data Management](#), Suleiman (free)
   • Other readings may be provided in Brightspace

   Supplemental:
   •  [R for Data Science](#), Grolemund 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 “Technology” section later in this document for information on Brightspace’s tech requirements.

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.

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.

**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

**Structure & 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 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.

**Course 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.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topics and Activities</th>
<th>Due</th>
</tr>
</thead>
</table>
| 1-2   | Module 1: Introduction to Data Management  
| 1/30  | Introduction to R.                                       | Assignment 1  
|       |                                                            | Tutorial 1                               |
| 3     | Module 2: Exploring Data - I                             | Tutorial 2                               |
| 2/6   | Last day to drop with 100% refund is 1/31               |                                          |
| 4     | Module 3: Exploring Data - II                            | Tutorial 3                               |
| 2/13  |                                                            |                                          |
| 5     | Module 4: Communicating visually                         | Tutorial 4  
| 2/20  |                                                            | Assignment 2                             |
| 6     | Module 5: Creating Reports                               |                                          |
| 2/27  |                                                            |                                          |
| 7     | Module 6: Importing Data and Validation                   | Assignment 3                             |
| 3/6   |                                                            |                                          |
| 8     | Module 7: SQL                                            | SDL Module 1                             |
| 3/13  |                                                            |                                          |
| 9     | Module 8: Tidy Data                                      | Assignment 4                             |
| 3/27  |                                                            |                                          |
| 10    | Module 9: Open Data                                      | Assignment 5                             |
| 4/3   | Last day to drop class with a “W” is 4/1                 |                                          |
| 11    | Module 10: Time Series Data                               | Tutorial 5                               |
| 4/10  | Priority registration for Fall 2022 is 4/4-15            |                                          |
| 12    | Module 11: Web data, Twitter                             |                                          |
| 4/17  |                                                            |                                          |
| 13    | Module 12: Web Scraping                                   | Assignment 6                             |
| 4/24  | Open registration for Fall 2022 begins 4/25              |                                          |
| 14    | Work on Self Directed Learning Modules 2 and 3           | SDL Modules 2, 3                         |
| 5/8   |                                                            |                                          |
| 5/8   | Work on Self Directed Learning Modules 2 and 3           |                                          |
|       | Last day of classes is 4/29                              |                                          |

**Assessment and Grading Criteria:**
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. All other assessments have descriptions of how they are graded in the assessment descriptions.

<table>
<thead>
<tr>
<th>Assignment / Assessment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorials (5 @ 5% each)</td>
<td>25%</td>
</tr>
<tr>
<td>Assignments (6 @ 9% each, lowest grade dropped)</td>
<td>45%</td>
</tr>
<tr>
<td>Self-Directed Learning Modules (3 @ 10% each)</td>
<td>30%</td>
</tr>
</tbody>
</table>

**Grading Scale**

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

COURSE POLICIES

Attendance and Late Work:
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.

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.

Withdrawal from the Course:
Last day to drop for 100% refund: Monday, January 31, 2022
Last day to drop with a grade of “W”: Friday, April 1, 2022
For more information, review USM’s Add/Drop and Withdrawal Policies[1].

Class Cancellation/Attendance Policy: Inclement Weather
(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).

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

\[
82-80\% = B- \\
60\% \text{ or lower} = F
\]
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.

**Final Examinations / Final Project**
There are no final examinations in this course. There will be two self-directed learning modules due during finals week. It is a USM academic policy that no tests or exams may be scheduled during the last week of classes.
Technology

Technology Support Center (Help Desk)
If you need technical support at any time during the course (especially concerning Brightspace), please contact the Technology Support Center:

Phone: (207) 780-4029 or 1-800-696-4357
Email: help@maine.edu

- You need a maine.edu account to access most of our online resources. If you can’t remember your account information, visit the UMS User Account Management website[3] or contact IT at 1-800-696-4357 and ask them to help you access your maine.edu account.
- The USM Portal[4] can be used to reach your student email, Brightspace, MaineStreet and most other university online tools through a single website.
- If this is the first time you’ve used Brightspace, Log into our Brightspace website[5] and tap the “Student Training” link in the right-hand column of the page.

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.

UNIVERSITY POLICIES AND RESOURCES

Disability Accommodations
The university is committed to providing students with disabilities equal access to all university programs and services. If you think you have a disability and would like to request accommodations, please contact the Disability Services Center. Timely notification is essential. The Disability Services Center can be reached by calling 207-780-4706 or by email dsc-usm@maine.edu. If you have already received a faculty accommodation letter from the Disability Services Center and would like to request accommodations for this course, please provide me with that information as soon as possible. Please make a private appointment so that we can review your accommodations together.

The following is a list of accessibility resources for the software we use in this course:

• Brightspace Accessibility information[11]
• Google Suite Accessibility information[12]

TUTORING AND WRITING ASSISTANCE
Tutoring at USM is for all students, not just those who are struggling. Tutoring provides active feedback and practice, and is available for writing, math, and many more subjects. Walk-in tutoring is available at the Glickman Library in Portland, the Gorham Library, and the LAC Writing Center. For best service, we recommend making an appointment at https://usm.maine.edu/learningcommons/schedule-tutoring-
For best service, we recommend making an appointment at the Learning Commons scheduling website.[13]
• Questions about tutoring should be directed to Naamah Jarnot at (207) 780-4554.
• Interested in becoming a more effective, efficient learner? Check out the AGILE website.[14]

Health and Counseling
Counseling is available at USM. The best way to schedule an appointment is by phone at (207) 780-5411. More information is available on the University Health and Counseling Services website[15].

Recovery Oriented Campus Center (ROCC)
A peer support community for students in recovery from substance abuse and other mental health conditions is available at USM. More information may be found online at the Recovery Oriented Campus Center website[16] or by contacting ROCC at (207) 228-8141.

Non-Discrimination Policy & Bias Reporting
The University of Southern Maine is an EEO/AA employer, and does not discriminate on the grounds of race, color, religion, sex, sexual orientation, transgender status, gender expression, national origin, citizenship status, age, disability, genetic information or veteran’s status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding non-discrimination policies: Amie Parker, Interim Director of Equal Opportunity, The Farmhouse, University of Maine Augusta, Augusta, ME 04333, (207) 581-1226, TTY 711 (Maine Relay System). Incidents of discrimination or bias at USM should be reported to Bias Prevention & Response Team (BRT) at usmbiasresponse@maine.edu

Statement of Religious Observance for Students
Absence for Religious Holy Days
Absence for Religious Holy Days: The University of Southern Maine respects the religious beliefs of all members of the community, affirms their rights to observe significant religious holy days, and will make reasonable accommodations, upon request, for such observances. If a student’s religious observance is in conflict with the academic experience, they should inform their instructor(s) of the class or other school functions that will be affected. It is the student’s responsibility to make the necessary arrangements mutually agreed upon with the instructor(s).

Title IX Statement
The University of Southern Maine is committed to making our campuses safer places for students. Because of this commitment, and our federal obligations, faculty and other employees are considered mandated reporters when it comes to experiences of interpersonal violence (sexual assault, sexual harassment, dating or domestic violence, and stalking). Disclosures of interpersonal violence must be passed along to the University’s Deputy Title IX Coordinator who can help provide support and academic remedies for students who have been impacted. More information can be found at the Campus Safety website[17] or by contacting Sarah E. Holmes at usm.TitleIX@maine.edu or 207-780-5767.

If students want to speak with someone confidentially, the following resources are available on and off campus:
Policy On Acceptable Conduct In Class Settings
If a student substantially disrupts a class, the professor may ask the student to align with this policy on conduct in a class setting. If the student refuses, the professor may, at their discretion, ask the student to leave. If the professor takes this step, they must attempt to communicate with the student and provide informal counsel and advice. The professor may elect to notify their dean of the situation as well. If the student disrupts the class again, the professor may, at their discretion, provide a written notification to the student, describe the offending behavior, and refer the student’s case to the appropriate academic dean and notify the dean of students that an official student conduct code violation has occurred. The Student Conduct Process is detailed on the Community Standards and Mediation website\(^{[18]}\).

Covid Face Covering Requirements
Per USM and the University of Maine System, all students, faculty, and staff members are required to wear a face covering, including during all face-to-face classes. Resident students are exempted from this requirement when in their own room in the residence hall. Students seeking additional exceptions from this requirement should refer to the DISABILITY ACCOMMODATIONS section of this syllabus. For up-to-date COVID requirements, please see the information on Covid restrictions and guidelines\(^{[19]}\) can be found on the University of Maine System website.

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BAN 300 - Foundations of Data Management - Course Syllabus

\[1\] https://usm.maine.edu/reg/addingdroppingwithdrawal  
\[2\] https://usm.maine.edu/community-standards-mediation/academic-integrity  
\[3\] http://accounts.maine.edu/  
\[4\] https://my.usm.maine.edu/  
\[5\] https://courses.maine.edu/d2l/home/6667  
\[6\] http://mozilla.com/firefox  
\[7\] http://www.google.com/chrome/  
\[8\] http://www.apple.com/safari/  
\[9\] http://accounts.maine.edu/  
\[10\] https://takeout.google.com  
\[11\] https://www.d2l.com/accessibility/standards  
\[12\] https://support.google.com/a/answer/1631886?hl=en  
\[13\] https://usm.maine.edu/learningcommons/schedule-tutoring-appointment  
\[14\] https://usm.maine.edu/agile  
\[15\] https://usm.maine.edu/uhcs  
\[16\] https://usm.maine.edu/recovery  
\[17\] https://usm.maine.edu/campus-safety-project  
\[18\] https://usm.maine.edu/community-standards-mediation/conduct-process  
\[19\] https://www.maine.edu/together/community-guidance/everyone/