

INSC 563: Data Management

Spring 2023

COURSE INFORMATION

INSC 563: Data Management, Spring 2023. Three credit hours
University of Tennessee, Knoxville
Course Mode: online, synchronous
Class Meetings: Mondays, 6:30 pm – 9:10 pm EST
ZOOM Course ID/Link: <https://tennessee.zoom.us/j/92371772875>
Passcode: 563

Faculty Contact Information

- Dr. Bradley Wade Bishop, Associate Professor
- wade.bishop@utk.edu
- COM 454
- 865.974.2775
- By appointment



SIS Office Information

- 450 Communications Bldg.
- 1345 Circle Park Drive
- Knoxville, TN 37996-0341
- SIS Office: 865.974.2148
- Fax (SIS): 865.974.4667

Welcome Statement

It is my pleasure to have you in this course. Welcome to SIS and the graduate degree in information sciences.

COURSE INFORMATION

Catalog Description

Foundational data management concepts and models used to describe the creation, organization, distribution, storage, access, retrieval, management, use, and preservation of data throughout the data lifecycle. Includes a review of socio-technical systems, including people, infrastructures, and stakeholders used to understand data management best practices, guidelines, and policies.

Student Learning Outcomes

Students who complete this course will be capable of demonstrating awareness, knowledge, and/or understanding of

- reviewing data management best practices, guidelines, and models
- developing a data management plan
- introducing socio-technical systems thinking for research data management

Course Design

The course adopts an active learning approach. Students are required to complete all required assignments, attend all class lectures, complete graded activities and assignments, and participate in all class activities, including teacher-led and student-led discussions, and small group and individual activities. All required assignments are listed in the Course Outline section of this syllabus. Additional resources are also provided. While not required, you may find additional resources useful when completing assignments.

Required Text(s)

There are no required text.

- Additional materials from outside of the textbook will be announced in advance and/or posted in Canvas course site.

COMMUNICATION

Email

I am required to communicate with you through your UTK email address. If you prefer to use another address, consult the [OIT Helpdesk](#) to obtain directions for forwarding your UTK email to your preferred address if you do not wish to check both accounts.

Instructor Availability

Please don't hesitate to email me with updates, questions, or concerns. I will typically respond within one or two days during the week, but I might not respond on the weekend. I will notify you if I will be out of town and/or if connection (or other) issues may delay a response.

COMPUTING REQUIREMENTS AND RESOURCES

Requirements

This class requires that you be comfortable with different technologies, including Online@UT (Canvas and Zoom), the Internet and Web searching, word processing, and presentation software. There are campus resources to support your use of technology (see list below), but ultimately it is your responsibility to make sure you have the necessary technical equipment and knowledge needed.

Course Resources

- Technology at SIS: <http://www.sis.utk.edu/sis-technology>
- UT Office of Information Technology (OIT): <https://oit.utk.edu/Pages/default.aspx>.
- The <http://lynda.com> website is a great source, with tutorials and videos on everything from Google Drive to our own out-of-class software Canvas, so check it out, at <https://oit.utk.edu/Training/online-training/lynda/Pages/default.aspx> . You'll need your UTK netID and password to access **Lynda.com** free of charge.
- Information about using Zoom: <https://oit.utk.edu/teachingtools/liveonline/best-practices-for-participants/>
- UT Libraries: <http://lib.utk.edu>

Technical Support

Online @UT Canvas Resources for Students: <https://oit.utk.edu/teachingtools/online/student-resources/>

Office of Information Technology (OIT) HelpDesk: <https://help.utk.edu/footprints/contact/> , or (865) 974.9900.

COURSE ATTENDANCE AND PARTICIPATION POLICIES

Learner Expectations

- Be prepared for all classes.
- Be on time for classes.
- Actively contribute to the learning activities in class.
- Get involved in constructive class discussions and activities to earn participation points.
- Abide by the UT Honor Code.
- Read the assigned materials.
- Submit assignments on time. Late submissions will incur penalty.
- Check your email and Canvas on a regular basis for announcements.
- Use audio in Zoom for asking questions or engaging in discussions.
- Be respectful of all classmates, regardless of age, gender, color, background, culture, disability, or other diversity.
- Be respectful in communicating with the instructor.
- Be prepared to work in small groups on activities and projects/assignments.
- Use technology and software such as Zoom and Canvas, among others, and associated features **responsibly** and ensure **safety** and **security**. [See also the **Disclaimer** section].

Instructor Expectations

- Be prepared for all classes.
- Evaluate student work fairly and equitably.
- Be respectful of all students.
- Create and facilitate a meaningful learning environment.
- Create and facilitate meaningful learning activities.

Attendance and Participation

It is assumed that each student will miss no more than one session and will speak in class -- the equivalent of a "B" grade for "participation." Missing more classes or failing to participate will lower your grade; frequent participation will raise the grade. Regular attendance is required and necessary. A substantial portion of your grade will be based on in-class work and participation.

Unexplained absences will affect your grade. Contact me as soon as possible if you cannot attend class. If you must be absent from class, you must:

- Inform me in advance or as soon as possible after class
- Submit any work due from the missed class period
- Obtain notes, handouts, and so forth from Canvas

Acceptable reasons for absence from the class include:

- Illness,
- Serious family emergencies,
- Military obligation,
- Severe weather conditions,
- Religious holidays,
- Obligations for court imposed legal obligations (i.e., jury duty and subpoena)
- Other reasons (at the instructor's discretion).

Missing more than one class meeting for reasons other than those listed above will have a negative impact on your course participation grade (**2-point reduction** for every absence).

Attendance Considerations Due to COVID-19

See UT policy is at, https://provost.utk.edu/wp-content/uploads/sites/10/2020/08/attendance_considerations_due_to_COVID-19.pdf

Class Cancellation

Should it be necessary to cancel a class meeting, I will inform you in advance via email and/or post an announcement on Canvas course site. See also the UT Inclement Weather policy below.

Inclement Weather

The Chancellor (or appointed representative) may officially close or suspend selected activities of the university because of extreme weather conditions. When a decision to close is made, it applies to all classes (whether on-campus or online). The information is distributed to the campus community, shared with local media, social media, and posted on the University homepage at <http://utk.edu>.

ADDITIONAL POLICIES AND POINTS OF INFORMATION

Disability Services

Any student who feels they may need an accommodation based on the impact of a disability should contact [Student Disability Services](#) in Dunford Hall at 865-974-6087, or by video relay at 865-622-6566, to coordinate reasonable academic accommodations.

University Civility Statement

Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability and courteousness. Civility enhances academic freedom and integrity, and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other's well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus. For more information, see the UT principles of [Civility and Community](#) and [Hilltopics Student Handbook](#).

CCI Diversity Statement

The College of Communication and Information recognizes that a college diverse in its people, curricula, scholarship, research, and creative activities expands opportunities for intellectual inquiry and engagement, helps students develop critical thinking skills, and prepares students for social and civic responsibilities. All members of the College benefit from diversity and the quality of learning, research, scholarship, and creative activities is enhanced by a climate of inclusion, understanding, and appreciation of differences, and the full range of human experience. As a result, the College is committed to diversity and equal opportunity and it recognizes that it must represent the diversity inherent in American society. The College is acutely aware that diversity and fairness are foundations that unite the College's faculty, staff, students, and the larger communication and information community.

Instructor Status as a Title IX Mandatory Reporter

University of Tennessee faculty are committed to supporting our students and upholding gender equity laws as outlined by Title IX. Please be aware that if you choose to confide in a faculty member regarding an issue of sexual misconduct, dating violence, or stalking, we are obligated to inform the University's Title IX Coordinator, who can assist you in connecting with all possible resources both on- and off-campus. If you would like to speak with someone confidentially, the Student Counseling Center (865-974-2196) and the Student Health Center (865-974-3135) are both confidential resources. For additional resources and information, visit <https://titleix.utk.edu/>

HELP Line

If you have any mental health or well-being concerns, contact [865-974-HELP](tel:865-974-HELP) (4357)—Help is available 24/7.

ASSIGNMENTS, ASSESSMENTS, AND EVALUATIONS

Academic Integrity

Students should be familiar with the [Hilltopics Student Handbook](#), and comply with all academic policies. This includes the University of Tennessee Honor Statement and the Academic Integrity Policy.

The Honor Statement reads: “*An essential feature of the University of Tennessee, Knoxville is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. ‘As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.’*” For more information, see the Honor Statement on the Academic Policies and Procedures page of the current [catalog](#) for student and faculty responsibilities.

The Academic Integrity policy reads: “*Study, preparation and presentation should involve at all times the student’s own work, unless it has been clearly specified that work is to be a team effort. Academic honesty requires that the student present his or her own work in all academic projects, including tests, papers, homework, and class presentation. When incorporating the work of other scholars and writers into a project, the student must accurately cite the source of that work.*” For additional information, see the [Student Code of Conduct](#).

Plagiarism – PLEASE READ CAREFULLY

Plagiarism in any of its forms is intolerable, and attention to matters of documentation in all written work is expected and required. Inadvertence, alleged lack of understanding, or avowed ignorance of the various types of plagiarism are not acceptable excuses.

Specific examples of plagiarism are:

1. Copying without proper documentation (quotation marks and a citation) written or spoken words, phrases, or sentences from any source.
2. Summarizing without proper documentation (usually a citation) ideas from another source (unless such information is recognized as common knowledge).
3. Borrowing facts, statistics, graphs, pictorial representations, or phrases without acknowledging the source (unless such information is recognized as common knowledge).
4. Collaborating on a graded assignment without the instructor’s approval.
5. Submitting work, either in whole or in part, created by a professional service and used without attribution (e.g., paper, speech, bibliography, or photograph).

Note that copying much text will not be acceptable even if proper documentation is provided.

All work will be verified for plagiarism, especially when the instructor is in doubt.

Students who may be unsure of the nature of plagiarism should consult the instructor or a guide for writing research reports. Resources are available through the University Libraries, including a [Citing Sources and Frequently Used Style Manuals](#).

Infractions of academic integrity are penalized according to the severity of the infraction but may include a course grade of "F."

ASSIGNMENTS

Assignment Descriptions and Due Dates

This table provides a brief summary of assignment by name, due date, point value and percentage of final grade. A brief description of each assignment follows the table.

Assignment	Point Value	Percentage of Final Grade	Due Date
Assignments (1-10)	80	80%	Various
Final Paper/Presentation	20	20%	3/6/2023 purpose 5/15/2023 final
TOTAL	100	100%	

Assignments:

The course will use the Data Management Skill building Hub Teaching Module for assignments (<https://dataoneorg.github.io/Education/> [Links to an external site.](#)) with lectures complimented by funded project activities, collaborations, experiences, and models from varied communities of practice. Additional resources may be consulted for some special topics:

- Consortium of European Social Science Data Archives (CESSDA) Training (<https://www.cessda.eu/Training> [Links to an external site.](#));
- Digital Curation Centre Resources (<http://www.dcc.ac.uk/resources> [Links to an external site.](#));
- Earth Science Information Partners (ESIP) Data Management Training Clearinghouse (<http://dmtclearinghouse.esipfed.org/> [Links to an external site.](#)); and
- ORNL DAAC <https://daac.ornl.gov/datamanagement/> [Links to an external site.](#).

Attendance & Participation:

It is important to note that class participation is not part of your grade but attendance and participation is an important component to facilitate learning in this class. You are expected to attend all classes. Contact me as soon as possible if you cannot attend class. If you must be absent from class, you must:

- Inform me in advance or as soon as possible after class.
- Submit any work due from the missed class period.
- Obtain notes, handouts, and so forth from Canvas.

Acceptable reasons for absence from class include:

- Personal illness; Serious family emergencies
- Military obligation
- Severe weather conditions
- Religious holidays and
- Obligations for court imposed legal obligations (i.e., jury duty, subpoena)

Final Paper/Presentation

1. Select and describe a topic, with a clear purpose and some literature review for consideration. Please select a topic that will benefit your future and that you will enjoy.
– *Due 11:59PM EST Monday, March 6.*
2. Find **research articles** (peer-reviewed) on the topic, and use your interpretation and evaluation of the research to inform important aspects of the future of research data management related to your topic; **DO NOT** simply summarize what has been researched, but relate the research articles to each other and synthesize a theme out of the articles you find. Each topic will have a different number of key articles, but for a final paper this length I expect *~20-30 citations*.
3. Discuss future implications for the field related to your topic and specifically for your career.
4. Finally, you will prepare a 15 minute presentation of your paper to inform the class. You may want to prepare a presentation for training a specific audience (e.g., a presentation to everyone from a synthetic biology lab, a talk at a nursing faculty meeting, a meeting with the heads of research supporting offices, or a workshop for new research assistants for an infectious disease lab).
5. As a semester long assignment, I have high expectations for the quality of this work. You should produce a paper that is of publishable quality. I am indifferent about structure or citation style; however, be consistent and do not hesitate to ask for clarification. In fact, you may want to take this opportunity to produce work that would lead to an actual presentation, paper, or poster.

To give full attention to the paper, please produce at least 4,000 words of content.

IS 563: Final Paper Rubric	6	4	2	0
Purpose (Due Mar 6)	The author presents the topic, with a working title, a brief description of an investigation plan, with how investigation will occur and also a literature review for consideration (at least 5 sources).	The author presents the topic, with a working title, a brief description of an investigation plan, but fails to include all other required details.	The author presents the topic, with a working title, a brief description of an investigation plan, but fails to at least half of the other required details.	Topic of the paper is unclear and does not address all required details.
Literature Review	Sufficient background information and a clear review of the topic and why it is important to the field is evident.	Adequate background information and a clear review of the topic and why it is important to the field is provided.	The author provides limited background information.	Insufficient or no background information is provided.
Critical Analysis of the Research	Exceptional integration and synthesis of research. Very effectively identifies and discusses implications and common themes relevant to the topic.	Research is integrated and well synthesized. Identifies and discusses some implications and/or themes relevant to the topic.	Very little integration and/or synthesis. Mainly reflects previous research findings, with very little critical analysis of the literature.	Discussion of the research is integrated poorly, with little to no critical analysis of past studies and/or articles.
Future Implications for Field	Effectively applies research findings and discusses implications for the future practice of the field and/or careers related to the topic.	Adequately discusses implications for the future practice of the field and/or careers related to the topic.	Discussion of application to future practice and/or careers is limited.	Does not discuss implications for future practice of the field or careers related to the topic.
References	Author includes at least 20 peer-reviewed articles and correctly cites them according to a consistent citation style of their choosing.	Author includes between 15-19 peer-reviewed articles and cites them according to a consistent citation style of their choosing.	Author includes fewer than 15 peer-reviewed articles and cites them according to their chosen citation style.	The author includes no peer-reviewed articles and does not cite any sufficient outside research.
Grammar and Formatting	No grammatical, spelling, or punctuation errors, and paper follows a consistent format.	Few grammatical, spelling, or punctuation errors, and format is generally consistent.	More than 10 grammatical, spelling, or punctuation errors, and/or formatting is inconsistent.	More than 15 grammatical, spelling, or punctuation errors, and/or inconsistent formatting detracts from paper's readability.
Length of Research Paper	Length of final paper meets the assigned 4,000-word minimum	Length of final paper falls slightly below 4,000-word minimum	Length of final paper falls sufficiently below the assigned 4,000-word minimum	Length of final paper is unacceptable.
Presentation	Class presentation is around 15 minutes long and clearly presents the main issues of the topic.	Class presentation is around 15 minutes long and fails to clearly cover the issues of the topic.	The presentation goes substantially over or under 15 minutes in length, but covers main issues of the topic	The presentation goes substantially over or under 15 minutes in length and is unclear in covering the main issues of the topic

The other assignment instructions will be made available in Canvas.

Submitting Assignments, Late Assignments

Assignments should be submitted to the “assignments” area of Canvas and are due (officially) at 11:59 p.m. EST on the due date listed on the Syllabus. Late assignments are not accepted unless prior arrangements have been made, or if you have an unexpected emergency. Quizzes, reading reflections, and activities have firm due dates and cannot be made-up.

Assignments & Examinations

Course letter grades will be determined at the end of the semester, based, in part on the comprehensiveness of the projects, assignments, and contributions. Student work is assigned a grade based on quality of thought and writing style, thoroughness of research and of references, appropriateness of length, and originality. Only exceptional work will receive an "A" grade. Papers that are received after the due date will be assigned a lower grade than would otherwise be received. All sources must be cited, quotations must be in quotation marks and attributed correctly. Not doing so constitutes plagiarism

Grading Scale

Semester grades will be assigned according to the following scale:

A	93-100	Superior performance (4 quality points)
A-	90-92.99	Intermediate superior performance (3.7 quality points)
B+	88-89.99	Very good performance (3.3 quality points)
B	83-87.99	Good performance (3.0 quality points)
B-	80-82.99	Intermediate good performance (2.7 quality points)
C+	78-79.99	Fair performance (2.3 quality points)
C	73-77.99	Satisfactory performance (2.0 quality points)
C -	70-72.99	Unsatisfactory performance (1.7 quality points)
D+	68-69.99	Unsatisfactory performance (1.3 quality points)
D	63-67.99	Unsatisfactory performance (1.0 quality points)
D -	60-62.99	Unsatisfactory performance (0.7 quality points)
F	0-59.99	Failure performance (0.0 quality points)
S		Satisfactory; only assigned for C or better work when a course is taken on a S/NC grading basis. Carries no point value.
NC		No Credit; indicates failure to complete a course satisfactorily, and is only assigned for C- or worse work when a course is taken on a S/NC grading basis. Carries no point value.
I		Under extraordinary circumstances and at the discretion of the instructor, the grade of I (Incomplete) may be awarded to students who have satisfactorily completed a substantial portion of the course but cannot complete the course for reasons beyond their control. An I carries no quality points. If the I grade is not removed within one calendar year or upon graduation, it shall be changed to an F and count as a failure in the computation of the grade point average.
W		Indicates student has officially withdrawn from the course or the university. Carries no point value.

Incompletes

Based on adopted University of Tennessee-Knoxville policy, a grade of *I* (Incomplete) is reserved for emergencies that prevent the student from completing the course on time. Incompletes are granted only under "the most unusual of circumstances" and solely at the discretion of the instructor. Plan your semester's course of study carefully to ensure sufficient time to complete the required work. For students who simply "disappear" without contacting the instructor and without completing the required form, an "F" is submitted.

COURSE EVALUATION

You will be invited by email from TNVoice to evaluate the course at the end of the term. Please participate in this valuable process. I read all comments, suggestions, and recommendations. I also invite your comments throughout the semester about the course.

DISCLAIMER

- *Be aware revisions may be made to this syllabus over the course of the semester. As such, the content contained within may be subject to change.*
- The instructor is not to be held responsible for any mishaps, injury, or other issues due to attending this class using mobile phones while driving. Such use is not recommended.
- The instructor is not to be held responsible to any mishaps, injury, or other issues/problems caused by using the technology such as Zoom software, microphone to enable the audio, regardless of whether such use is through mobile phones, tablets, laptops, or desktop computers.

COURSE OUTLINE

The course outline is subject to change. I will notify you in advance for any change made to the outline and due dates.

Session	Date	Topic	Assigned Readings	Activities Due Date
1	01/23	Why Data Management?		
2	01/30	ORCID, Data Sharing		Assignment 1
3	02/06	Data Management Plans		Assignment 2
4	02/13	Data Entry & Manipulation		Assignment 3
5	02/20	Data Quality Control and Assurance		Assignment 4
6	02/27	Protecting Your Data		Assignment 5
7	03/6	Discussion of Assignment 5		Submit final paper idea
	03/13	Spring Break		
8	03/20	Metadata		Assignment 6
	03/27	iConference		
9	04/03	Data Citation		Assignment 7
10	04/10	Workflows		Assignment 8
11	04/17	Legal and Policy Issues		Assignment 9
12	04/24	Data Services Librarians		Assignment 10
13	05/01	Final Presentations		
14	05/08	Final Presentations		<i>Paper due May 15</i>