

INLS 765: Information Technology Foundations for Managing Digital Collections

Spring 2023 Course Syllabus

Course Goals

Upon completion of this course, you will be able to:

- assess many of the opportunities and challenges associated with digital information systems that you have not seen before and explain them to those who have less technical background than you.
- actively contribute to discussions about design, maintenance and changes to the information systems that support digital collections for which you are responsible.
- read and understand the information technology trade press, recognizing opportunities and strategic implications for the management of digital collections.
- contribute substantive recommendations for policies related to the management of digital collections.

Your Instructor

My name is Jason Casden (pronouns: he/him) and I'm the head of the Software Development department at the UNC at Chapel Hill University Libraries. I manage a department of roughly 10 software developers and serve as a personnel and/or project manager (in partnership with many wonderful colleagues) for projects related to the [Carolina Digital Repository](#), [UNC Digital Collections Repository](#), and other infrastructure addressing large-scale digital preservation, archival information management, and the Libraries' public catalog interface. My preferred communication method is email. My email address is casden@email.unc.edu. I will respond to requests within 24 hours. I am happy to arrange both individual and group video calls and will schedule several optional drop-in sessions. Please don't hesitate to contact me with any questions or concerns.

Course Design

This course was designed by Dr. Cal Lee and you will see quite a bit of his excellent content during this course. My primary goal as your instructor is to contextualize this content as a current manager of digital collections systems and staff and as a software engineer. You should finish this course not just with a solid grounding in the information systems that support digital collections but also a solid awareness of how this knowledge is applied, today, in major digital collections infrastructure projects.

Course Lessons

See the Schedule for important dates.

Information Technology Foundations for Managing Digital Collections

Lesson Title

- 1 Nature and Characteristics of Contemporary Information Technologies
- 2 Technological Components: Historical Origins and Interoperability and General Overview of Computer Architecture
- 3 How to Read a Bit: Storage, Signal Detection, and the Logic of Bits
- 4 Representation Information
- 5 Indirection by Design: Identifiers for Digital Objects, Operating Systems, and File Systems
- 6 Moving Bits around: Input/Output and Networks
- 7 Making and Running Software: Essential Components
- 8 Lessons and Strategies

Readings & Resources

Required Textbook Readings

- Campbell-Kelly, Martin, William Aspray, Nathan Ensmenger, and Jeffrey Yost. *Computer: A History of the Information Machine*. Third ed. ISBN: 978-0813345901
Boulder, CO: Westview, 2014
- White, Ron and Timothy Edward Downs. *How Computers Work*. 10th Edition. How It Works Series. Indianapolis, IN: Que, 2014. ISBN: 978-0789749840

Additional required readings are available online. Use the key below to locate specific course readings.

Course Readings Key

- B book
R on reserve at SILS Library in Manning Hall
O [online](#) through UNC license *
W publicly accessible website
C available through course web site on Sakai (under each lesson)

* Accessing these materials requires you either to use a computer with a UNC IP address or visit the associated sites through a UNC proxy server.

- Information on [Off-Campus Access to Electronic Resources](#)
- When accessing off-campus, you may use a [bookmarklet](#) [libproxy.lib.unc.edu/login?url=] to enter through UNC proxy server.

Reading Tips

Try to familiarize yourself with the focal readings for each lesson. Complete a closer reading of materials related to the paper assignments you've selected.

While you're not required to read the **Related Readings**, you might find these supplemental materials helpful in further exploring the ideas or seeing them expressed in different ways. They're essentially bibliographies of related sources for each unit of the class.

Tips on reading strategically: [How to Read a Book](#)

Additional Resources

[Computer Science Unplugged](#)

TOOLS TO SUPPORT CURATION OF DIGITAL COLLECTIONS

This course is not focused on specific applications. However, it is often helpful to know what software is available to support various activities that relate to the topics of the course. [COPTR directory of tools](#)

Assignments

There are two types of written assignments in this course: online forum posts and short papers.

- **Online forum posts** - These are indicated under each lesson. Please post initially by 11pm on the Wednesday before the lesson's assignment is due, and provide any responses to the posts of others by 11pm on the Sunday that the lesson's assignment is due.
- **Short paper assignments** - There are seven assignments, but you only need to complete five of them (skip two). Each paper should be a maximum of one page and is due at 11pm on the Sunday at the end of each lesson (see the course schedule).

Final Exam

The final exam will include sets of short answer and long answer questions from which you will select a smaller number to answer. You will have three hours to complete the exam once you have started.

Evaluation & Grading

20 percent = Participation in class discussion

50 percent = Paper assignments (5 @ 10 percent each)

30 percent = Final Exam - **May 1-3 (you choose 3-hour block on one of these days).**

Grading Scale

The most important measures of your performance in this and all other classes at SILS are:

- your ability to engage in challenging materials with your fellow students;
- your reputation for insights and professionalism among your peers and with your instructor;
- your integration of course material with the other things you are learning both inside and

- outside the classroom; and
- your ability to apply what you’ve learned in your future career.

However, the conventions of academia dictate that I also assign labels (called grades) to your work on assignments and for the course as a whole.

Based on [UNC Registrar Policy for graduate-level courses](#), both assignment and semester grades are assigned as in the table below. Few students will obtain an “H,” which signifies an exceptionally high level of performance (higher than an “A” in an A–F systems).

Letter Grade	Description of Letter Grade
H	Superior work: complete command of subject, unusual depth, great creativity or originality
P+	Above average performance: solid work somewhat beyond what was required and good command of the material
P	Satisfactory performance that meets course requirements (expected to be the median grade of all students in the course)
P-	Acceptable work in need of improvement
L	Unacceptable graduate performance: substandard in significant ways
F	Performance that is seriously deficient and unworthy of graduate credit

Academic Policies

By enrolling as a student in this course, you agree to abide by the University of North Carolina at Chapel Hill policies related to the acceptable use of online resources. Please consult the [Acceptable Use Policy](#) on topics such as copyright, net-etiquette, and privacy protection.

As part of this course, you may be asked to participate in online discussions or other online activities that may include personal information about you or other students in the course. Please be respectful of the rights and protection of other participants under the [UNC-Chapel Hill Information Security Policies](#) when participating in online classes.

When using online resources offered by organizations not affiliated with UNC-Chapel Hill, such as Google or YouTube, please note that the terms and conditions of these companies and not the University’s Terms and Conditions apply. These third parties may offer different degrees of privacy protection and access rights to online content. You should be well aware of this when posting content to sites not managed by UNC-Chapel Hill.

When links to sites outside of the unc.edu domain are inserted in class discussions, please be mindful that clicking on sites not affiliated with UNC-Chapel Hill may pose a risk for your computer due to the possible presence of malware on such sites.

Honor Code & Plagiarism

As a UNC student, you are expected to uphold the University’s [Honor Code](#), which states that “It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and support the enforcement of the Honor Code, which prohibits lying, cheating, or stealing

when these actions involve academic processes or University students or academic personnel acting in an official capacity.”

It is very important that you both attribute your sources and avoid excessive use of quotes (see separate document called "In Your Own Words"). Be aware of the University of North Carolina policy on plagiarism. Your written work must be original. Ask if you have any doubts about what this means.

All cases of plagiarism (unattributed quotation or paraphrasing) of anyone else's work, whether from someone else's answers to homework or from published materials, will be officially reported and dealt with according to UNC policies (Instrument of Student Judicial Governance, Section II.B.1. and III.D.2, <http://instrument.unc.edu>).

To learn more, view this brief [Plagiarism Tutorial](#) created by the librarians of UNC-Chapel Hill, Duke University, NC State University, and NC Central University.

Email

SILS requires the use of UNC email accounts for academic course communications. It is the responsibility of students to access UNC email accounts frequently in order to receive timely information about assignments and deadlines.

Accessibility Resources and Services

The University of North Carolina at Chapel Hill facilitates the implementation of reasonable accommodations, including academic adjustments, resources and services, for students with disabilities, chronic medical conditions, a temporary disability or pregnancy complications resulting in barriers to fully accessing University courses, programs and activities.

Accommodations for students are determined through Accessibility Resources and Service (ARS) for individuals with documented qualifying disabilities in accordance with applicable state and federal laws.

Please refer to the [ARS Website](#) for contact information or email ars@unc.edu.

Diversity Statement

“In support of the University’s diversity goals and the mission of the School of Information and Library Science, SILS embraces diversity as an ethical and societal value. We broadly define diversity to include race, gender, national origin, ethnicity, religion, social class, age, sexual orientation, and physical and learning ability. As an academic community committed to preparing our graduates to be leaders in an increasingly multicultural and global society we strive to:

- Ensure inclusive leadership, policies and practices;
- Integrate diversity into the curriculum and research;
- Foster a mutually respectful intellectual environment in which diverse opinions are valued;
- Recruit traditionally underrepresented groups of students, faculty and staff; and
- Participate in outreach to underserved groups in the State.

The statement represents a commitment of resources to the development and maintenance of an

academic environment that is open, representative, reflective and committed to the concepts of equity and fairness.”

~[The faculty of the School of Information and Library Science](#)

Classroom code of conduct

We are a learning community and should treat each other with the respect we would expect of others. Constructive disagreement is encouraged, but please attempt to balance critiques with efforts to build and maintain a welcoming classroom community. I will try my best to do the same, but I welcome any suggestions for improvements or even general statements of discomfort.

Our classroom is dedicated to providing a harassment-free course experience for everyone, regardless of gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion (or lack thereof), or technology choices. Harassment includes offensive verbal comments related to gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion, technology choices, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention. We do not tolerate harassment of course participants in any form. Sexual language and imagery is not appropriate for any course setting or products.

If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact your instructor or another SILS faculty member immediately.

Adapted from <http://confcodeofconduct.com/>.