LIB 225: Engineering Research Sources and Strategies

Spring 2022

Course Details¹

LIB 225 – Spring 2022 Wake Downtown, Room 3506 Mondays 2:30 – 3:45 p.m.

Instructor Information

J. Denice Lewis

(336)758-1927

Office hours are by appointment via Zoom. Schedule an appointment online at https://wfu.libcal.com/appointments/denicelewis

What will I learn in LIB225?

Per ACRL information literacy standards for science and engineering/technology, students will develop the ability to

- Determine the nature and extent of the information needed.
- Acquire needed information effectively and efficiently.
- Critically evaluate the procured information and its sources, and as a result, decide whether to modify the initial guery and/or seek additional sources and whether to develop a new research process.
- Understand the economic, ethical, legal, and social issues surrounding the use of information and its
 technologies and either as an individual or as a member of a group, uses information effectively, ethically, and
 legally to accomplish a specific purpose.
- Understand that information literacy is an ongoing process and an important component of lifelong learning and recognizes the need to keep current regarding new developments in their field.

The ACRL website details the course learning outcomes at https://www.ala.org/acrl/standards/infolitscitech.

What course materials are required in LIB225?

- Bring your laptop to class every day for in-class activities
- You will not need to have your laptop open during class lectures or discussions.

All other required course content and readings will be made available to you online in Canvas (https://canvas.wfu.edu/).

What is expected of me during the semester?

All students are responsible for knowing and observing the Wake Forest University Honor Code and Conduct System for Undergraduate Students. Plagiarism and academic misconduct will result in automatic failure of the course and sanctions from the University Honor and Ethics Council. If you have any questions about what does or does not constitute plagiarism, please ask.

What can I expect during class?

Class discussions are an essential form of learning in LIB225 and will require prior preparation and engagement. For this reason, pre-work will be assigned before each class. These out-of-class assignments are meant to prepare you for (and encourage your participation in) class discussion and activities.

To help cultivate a positive classroom environment, please refrain from classroom behaviors that are disruptive to the instructor and your fellow students (cell phones, food, arriving late to class).

What software will I need for the course?

To capture information seeking behaviors as well as track resources identified, the following software is required:

- TechSmith Capture (https://www.techsmith.com/jing-tool.html)
- Zotero (https://www.zotero.org/download/)

¹ The course syllabus is intended as a framework for how the course will be conducted. However, it may be modified during the semester. Any modifications will be discussed during class and posted in Canvas.

² **NOTE:** Your emails are important to me. However, I regularly check and respond to email during my work hours e.g. 8:30 a.m. – 5 p.m. Monday – Friday. Please plan ahead and schedule an appointment online if needed.

How is my grade calculated?

The following categories compose the overall grade in the course:

Participation/Attendance	15
"Database" Analysis and Demonstration	20
Homework	50
Prework	15

Classroom attendance is necessary to achieve the learning/performance objectives in the course. However, please stay at home if you are ill, test positive for COVID, or are in quarantine due to exposure.

What is breakout for an A, A-, B, etc.? 3

The following categories compose the overall grade in the course:

Α	<i>x</i> ≥ 93		
A-	$90 \le x < 93$		
B+	$87 \le x < 90$		
В	$83 \le x < 87$		
B-	$80 \le x < 83$		
C+	$77 \le x < 80$		
С	$73 \le x < 77$		
C-	$70 \le x < 73$		
D+	$67 \le x < 70$		
D	$63 \le x < 67$		
D-	$60 \le x < 63$		
F	<i>x</i> ≤ 60		

Are late assignments accepted?

Homework is due on Sundays at 11:59 p.m. and may be submitted late for a 20% penalty per day⁴. However, no late submissions/demonstrations will be accepted for make-up attendance assignments, pre-work, and the database/tool analysis demonstration and review. For the database/tool demonstration, prior communication⁵ will be needed to select a different database/tool and date.

Where do I submit/complete my assignments?

We will utilize Canvas to submit assignments in the course. More information for students using Canvas is available at https://canvas.wfu.edu/for-students/.

What support services are available to students?

Center for Learning, Access, and Student Success (CLASS) 118 Reynolda Hall https://class.wfu.edu/

Office of Personal and Career Development 230 Reynolda Hall https://opcd.wfu.edu/

Writing Center
426 ZSR Library
https://writingcenter.wfu.edu/

Counseling Center 117 Reynolda Hall

https://counselingcenter.wfu.edu/

What if I need accommodations?

If you require an accommodation for taking this course, please contact CLASS at (336)758-5929 within the first two (2) weeks of class. I will be happy to discuss accommodation privately in more detail if needed.

NOTE: Last day to drop full-term classes is Tuesday, February 15th.

³ Incompletes will be assigned in the case of documented medical emergencies.

⁴ Homework will be due on Friday at 11:59 p.m. the week prior to spring break e.g.

⁵ A student will need to email the instructor by the Friday preceding their demonstration date to be assigned a different tool/date for credit.

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LIB 225 Class Schedule

Any changes that are made to our course schedule throughout the semester will be discussed in class and reflected in this syllabus. **NOTE:** You are responsible for keeping track of any changes.

Week	Agenda	Pre-work (Due before class)	Homework
1	Welcome and course structure	N/A	Download the required software
2	No class! MLK Holiday		
3	Types of information resources	Video: Information timeline Chapter 1 in the Oxford Guide to Library Research	How do you conduct research now?
4	Identifying keywords and Library of Congress Subject Headings (LCSH)	Video: Keywords Chapter 5 in the Oxford Guide to Library Research	Find a LCSH for your technical topic
5	Developing a search strategy: Boolean operators and modifiers	Videos: Boolean operators and modifiers	Develop a search string for different topics
6	Search strategy: Forward and backwards citation searching	Video: Reading and mining bibliographies	Conduct forward and backwards citation searching on an article
7	Evaluating resources	Factitious quiz	No homework!
8	Moving from research question/topic to search string	No prework!	Conduct research on a topic in Primo and Web of Science
9	No class! Spring break		
10	Gray literature	Video: Gray literature	Develop a search string for a topic and search specific platforms for gray literature
11	Patents and standards	Videos: ISO standards and what is a patent	Find a patent and a standard on different platforms for a grand challenge
12	Developing a search strategy: Identifying where to search depending on your topic	Upload a project file from a class or describe a project you've chosen in class	Conduct research on a different class project and reflect on the process
13	Copyright, fair use, and open access	No prework!	Find a legal case, article, and an open access article on a given topic.
14	The intersection of data science, information literacy, and artificial intelligence (AI)	Video: What is data literacy	Select a grand challenge and find relevant resources with an AI tool from three categories
15	Synthesizing your research findings	Video: Synthesis table for literature reviews	From a given topic, find resources and discuss how to develop a synthesis matrix
16	7 habits of lifelong learners	Video: 7 habits of highly effective people summary	Exploring strategies for developing knowledge and skills in a specific field
Final	Post assessment	No prework!	Analyzing the difference in information seeking knowledge and skills