

CSC 105 Digital Humanities - Spring 2023

Syllabus

Marcus Birkenkrahe

January 3, 2023

1 General Course Information

- Meeting Times: Tue/Thu from 2.30 - 3.45 pm
- Meeting place: Derby science building computer lab 209
- Professor: Marcus Birkenkrahe
- Office: Derby Science Building 210
- Phone: (870) 307-7254 (Office) / (501 422-4725 (Private)
- Office Hours: Tue/Thu 4-4.30 pm, Mon/Wed/Fri 4.15-4.45 pm
- Textbooks: Text mining in Practice with R (Kwartler, 2017), Text mining with R - A Tidy Approach (Silge/Robinson, 2017)
- Lesson plan: follows "Text mining with R" track in DataCamp

2 Objectives

Understanding and practicing the basis of current AI technologies used in Natural Language Processing applications like DALL-E, ChatGPT, Alexa or Siri. Applying text mining techniques to sentiment analysis, word association, and pattern matching.

3 Student learning outcomes

Students who complete CSC 105, "Digital Humanities - working with text data", will be able to:

- Wrangle, visualize and model text data analysis problems
- Manipulate string data with the **stringr** R package
- Mine text data with the Bag-of-Words technique
- Carry out simple sentiment analysis of text data
- Know how to effectively present assignment results
- Complete an independent research project and present results
- Master data science infrastructure for editing and graphing

4 Course requirements

None. Some basic proficiency in R and the "Tidyverse" packages is useful but not required (use DataCamp lessons or Matloff's "faster" online tutorial on GitHub).

Some knowledge of, and experience with computers is useful but not critical. Curiosity and discipline are essential. You will gain data literacy skills by taking this course. The course will prepare you for further studies in computer and data science, or in other disciplines that use modern computing, i.e. every discipline, from accounting to zoology).

5 Grading system

REQUIREMENT	UNITS	PPU	TOTAL	% of TOTAL
Final exam	1	100	100	20.
Home assignments	15	10	150	30.
Class assignments	10	10	100	20.
Final project	1	50	50	10.
Multiple-choice tests	15	10	100	20.
TOTAL			500	100.

You should be able to see your current grade at any time using the Schoology gradebook for the course.

6 Grading table

This table is used to convert completion rates into letter grades. for the midterm results, letter grades still carry signs, while for the term results, only straight letters are given (by rounding up).

%	MIDTERM GRADE	FINAL GRADE
100-98	A+	
97-96	A	A (PASSED -
95-90	A-	VERY GOOD)
89-86	B+	
85-80	B	B (PASSED -
79-76	B-	GOOD)
75-70	C+	
69-66	C	C (PASSED -
65-60	C-	SATISFACTORY)
59-56	D+	
55-50	D	D (PASSED)
49-0	F	F (FAILED)

7 Standard Policies

7.1 Honor Code

All graded work in this class is to be pledged in accordance with the Lyon College Honor Code. The use of a phone for any reason during the course of an exam is considered an honor code violation.

7.2 Class Attendance Policy

Students are expected to attend all class periods for the courses in which they are enrolled. They are responsible for conferring with individual professors regarding any missed assignments. Faculty members are to notify the Registrar when a student misses the equivalent of one, two, three, and four weeks of class periods in a single course. Under this policy, there is no distinction between “excused” and “unexcused” absences, except that a student may make up work missed during an excused absence. A reminder of the college’s attendance policy will be issued to the student at one week, a second reminder at two weeks, a warning at three weeks, and notification of administrative withdrawal and the assigning of an “F” grade at four weeks.

Students who are administratively withdrawn from more than one course will be placed on probation or suspended.

7.3 Academic Support

The Morrow Academic Center (MAC) helps students who want to improve grades by providing peer-led services including Supplemental Instruction (SI), tutoring, the Writing Center, and academic coaching as well providing 24-hour, online tutoring for all subjects through Tutor.com. A schedule of peer-led services is available at lyon.edu/mac and Tutor.com is accessed through courses in Schoology. Contact Donald Taylor, Director of Academic Support, at 870-307-7319 or donald.taylor@lyon.edu for more information about MAC services.

7.4 Technology Support

For general technology support, you can contact the IT department by emailing support@lyon.edu or by calling 870-307-7555. For assistance with classroom-related technologies, such as the learning management system (LMS), you can request support using the methods above, or you can contact sarah.williams@lyon.edu directly for assistance. Your course content will be accessible digitally using either the Schoology or Canvas LMS. Both LMS platforms will use your myLyon credentials for your student login.

- For Canvas, login at lyon.instructure.com
- For Schoology, login at lyon.schoology.com

7.5 Disabilities

Students seeking reasonable accommodations based on documented learning disabilities must contact Interim Director of Academic Support Donald Taylor in the Morrow Academic Center at (870) 307-7019 or at donald.taylor@lyon.edu.

7.6 Harassment, Discrimination, and Sexual Misconduct

Lyon College seeks to provide all members of the community with a safe and secure learning and work environment that is free of crime and/or policy violations motivated by discrimination, sexual and bias-related harassment, and other violations of rights. The College has a zero-tolerance policy against gender-based misconduct, sexual assault, and interpersonal violence toward

any member or guest of the Lyon College community. Any individual who has been the victim of an act of violence or intimidation is urged to make an official report by contacting a campus Title IX coordinator or by visiting www.lyon.edu/file-a-title-ix-report. A report of an act of violence or intimidation will be dealt with promptly. Confidentiality will be maintained to the greatest extent possible within the constraints of the law. For more information regarding the College's Title IX policies and procedures, visit www.lyon.edu/title-ix.

7.7 Mental & Behavioral Health

Lyon College is dedicated to ensuring each student has access to mental and behavioral health resources. The College's Mental and Behavioral Health Office is located in Edwards Commons and is partnered with White River Health System's Behavioral Health Clinic. The office is committed to helping the Lyon community achieve maximum mental and behavioral wellness through both preventative and reactive care. A full-time, licensed, professional counselor provides counseling, consultations, outreach, workshops, and many more mental and behavioral services to Lyon students, faculty, and staff at no cost. The Mental and Behavioral Health Office also provides access to White River Health System's services and facilities, including medication management and in-patient and out-patient care. To make an appointment, contact counseling@lyon.edu.

7.8 College-Wide COVID-19 Policies

The College does not require masks in instructional and meeting spaces inside academic buildings. However, if instructors require masks in their classroom, lab, or studio, then students and guests must comply with that requirement. Vaccines are strongly encouraged for all faculty, staff, and students. Vaccines are not mandated for Lyon College community members, although there may be specific courses involving interactions with vulnerable, external populations where a vaccine may be required. The College will continue to offer symptomatic testing for students, faculty and staff.

7.9 Details

Details specific to this course may be found in the subsequent pages of this syllabus. Those details will include at least the following:

- A description of the course consistent with the Lyon College catalog.

- A list of student learning outcomes for the course.
- A summary of all course requirements.
- An explanation of the grading system to be used in the course.
- Any course-specific attendance policies that go beyond the College policy.
- Details about what constitutes acceptable and unacceptable student collaboration on graded work.
- A clear statement about which LMS is being used for the course.

7.10 Learning Management System (LMS)

We will use Canvas in this course.

7.11 Assignments and Honor Code

There will be several assignments during the summer school, including programming assignments and multiple-choice tests. They are due at the beginning of the class period on the due date. Once class begins, the assignment will be considered one day late if it has not been turned in. Late programs will not be accepted without an extension. Extensions will **not** be granted for reasons such as:

- You could not get to a computer
- You could not get a computer to do what you wanted it to do
- The network was down
- The printer was out of paper or toner
- You erased your files, lost your homework, or misplaced your flash drive
- You had other coursework or family commitments that interfered with your work in this course

Put “Pledged” and a note of any collaboration in the comments of any program you turn in. Programming assignments are individual efforts, but you may seek assistance from another student or the course instructor. You may not copy someone else’s solution. If you are having trouble finishing an

assignment, it is far better to do your own work and receive a low score than to go through an honor trial and suffer the penalties that may be involved.

What is cheating on an assignment? Here are a few examples:

- Having someone else write your assignment, in whole or in part
- Copying an assignment someone else wrote, in whole or in part
- Collaborating with someone else to the extent that your submissions are identifiably very similar, in whole or in part
- Turning in a submission with the wrong name on it

What is not cheating? Here are some examples:

- Talking to someone in general terms about concepts involved in an assignment
- Asking someone for help with a specific error message or bug in your program
- Getting help with the specifics of language syntax or citation style
- Utilizing information given to you by the instructor

Any assistance must be clearly explained in the comments at the beginning of your submission. If you have any questions about this, please ask or review the policies relating to the Honor Code.

Absences on Days of Exams: Test “make-ups” will only be allowed if arrangements have been made prior to the scheduled time. If you are sick the day of the test, please e-mail me or leave a message on my phone before the scheduled time, and we can make arrangements when you return.

7.12 Attendance policy

In accordance with college policy, if you miss 4 weeks of class, you fail the course automatically. Any missed meetings result in an "Early Alert" report.

You should take care not to miss consecutive sessions if at all possible - otherwise you risk losing touch with the class and falling behind.

8 Important Dates

DATE	DAY	DESCRIPTION
3 January	Tuesday	Last day to deposit for '22 spring semester
10 January	Tuesday	Classes begin
16 January	Monday	MLK Day - no classes
17 January	Tuesday	Last day to add a class
24 January	Tuesday	Last day to drop without record of course Last day to declare a course pass-fail Deadline for removal of incompletes
25-28 February	Saturday-Tuesday	Mental-Health break (no classes)
1 March	Wednesday	Mid-term grades available by noon
8 March	Wednesday	Lst day to drop a course with a "W"
18-26 March	Saturday-Sunday	Spring break
7-9 April	Friday-Sunday	Easter break
18 April	Tuesday	Honors Convocation
4 May	Wednesday	Last day of spring classes
4-7 May	Thursday-Sunday	Final exams for graduating seniors (start 6pm Thu, no exams before 1pm Sun)
5-10 May	Thursday-Tuesday	Final exams for non-graduating students (no exams before 1pm on Sunday)
9 May	Tuesday	Senior grades due by noon
12 May	Friday	Baccalaureate
13 May	Saturday	Spring commencement
17 May	Wednesday	All final grades due by noon

9 Schedule and session content

For this course, we use the DataCamp track "Text mining with R". Only a couple of courses are missing. If you complete them, too, you will emerge from this class with four text mining certificates.

WEEK	DATE	DATA CAMP ASSIGNMENT	TESTS
1	Jan 10,12		
2	Jan 17,19	Wrangling text	Test 1
3	Jan 24,26	Visualizing text	Test 2
4	Jan 31, Feb 2	Sentiment analysis	Test 3
5	Feb 7,9	String basics	
6	Feb 14,16	Introduction to stringr	Test 4
7	Feb 21,23	Pattern matching with regexp	Test 5
8	Mar 2	More advanced matching	Test 6
9	Mar 7,9	Three case studies	
10	Mar 14,16	Text mining with Bag-of-Words	Test 7
11	Mar 28,30	Word clouds and other visuals	Test 8
12	Apr 4,6	Word clustering and tokenization	Test 9
13	Apr 11,13	HR analytics case study	
14	Apr 18,20	Polarity scoring	Test 10
15	Apr 25,27	Visualizing sentiment	
16	May 2	Case study: Airbnb reviews	