DIGHUM101 – Practicing the Digital Humanities
Dr. Brooks Jessup brooks.jessup@berkeley.edu

Dates: Mondays, Tuesdays, Wednesdays, and Thursdays (May 24 – July 2, 2021)
Time: 1:00 – 3:00 PM
Where: Zoom (Meeting ID: 989 8115 8979; Passcode: 726053)
Office Hours: Friday 1-3pm or by appointment on Zoom (Meeting ID: 937 9357 0934; Passcode: 895040)
Prerequisites: None!
Requirements: Computer, Zoom account, and Internet connection.

LEARNING OBJECTIVES
The goal of this course is to teach you basic principles for conducting professional research in the Digital Humanities. You will learn how to program Python in Jupyter Notebooks to access, explore, visualize, and analyze data in humanities contexts. You are strongly encouraged to concurrently enroll in DIGHUM 100 – Theory and Methods in the Digital Humanities to compliment this experience with a strong theoretical foundation. By the end of this course, you will learn:

- A variety of Pythonic approaches to explore questions in the humanities.
- How to understand data more holistically; its generative process and life cycle.
- Strategies for organizing research projects based on your interests.
- Methods for data acquisition and visualization, computational text analysis, and machine learning
- The importance of developing a critical lens in your field of study.

SOFTWARE INSTALLATIONS
Please have this complete before first day*
- Download and install Python Anaconda 3.9 distribution: https://www.anaconda.com/distribution/
- Windows users only must install Git (Mac users do not have to): https://git-scm.com/downloads

COURSE MATERIALS
- Course materials and instructions are on bCourses and the course Github repository:
  https://github.com/dlab-berkeley/DIGHUM101-2021

Assignments and Grading

Task	Assignment	Topic	Due	% grade	Points	Type
Attendance	1	(required)	Everyday	10	20	Participation
Homework	2	Video	July 2	20	40	Digital format
Group project	3	Topic	June 21	10	20	One-page summary
	4	Presentation	June 28-29	20	40	Slideshow
Individual project	5	Topic	June 21	10	20	Two-page summary
	6	Presentation	June 30-July 1	20	40	Jupyter Notebook
	7	Repository	July 2	10	20	GitHub
				100	200	

NOTE: Grading rubrics will be added to bCourses.
Grading is straight scale: A=90-100; B=80-89; C=70-79; D=60-69; F<60

Assignment descriptions

1. **Attendance (sign-in via Zoom).** This course is synchronous and attendance is required for all students. Asynchronous exceptions will be considered on a case-by-case basis, such as for those living in distant time zones. Each class is divided into two types:
   a. **Lecture days:** The instructor will lecture for 60 minutes to explain the day's topic. The remainder of the time will be for you to work through specific challenge set problems, ask questions, and think about how the topic relates to your projects.
   b. **Project days:** These days will be exclusively focused on your individual and group projects.

2. **Homework: Video (submit on bCourses)**
   Record a 3-5 minute video that <u>demonstrates thoughtful reflection</u> about how your ideas regarding digital humanities research grew throughout this course. Use specific examples and perspectives from your individual and group projects. You must appear in at least 30 seconds of footage.

Group Project. The group project will require you to work in small groups, read some theoretical articles, and give a presentation to your classmates. It consists of two assignments: a one-page summary (single-spaced) about your group's theoretical topic and a presentation.

3. **Group Project – Topic (submit a one-page single-spaced proposal on bCourses – only one per group)**
   Each student will be assigned to a group. Each group must choose a theoretical topic to present on using the articles in the "selected readings" folder on bCourses. Everyone must read three articles from this folder. Each student in a group can choose the same three articles, or each student can choose different articles but the topic must be unified and coherent across all group members and readings. Do not do any programming/coding for this group project. **Use 10-12 point font and include references cited!**

4. **Group Project – Presentation (publish in your GitHub repository):**
   Each group will present a 10-12 minute presentation of their topic using PowerPoint, Prezi, .html, pdf, etc. Be creative here! Emphasize visuals, infographics, video, audio, polls, interactivity, etc. so long as it does not detract from your point (and works via Zoom screen share). Keep your talking points clear and concise and minimize the amount of text you use.

Individual Project. The purpose of the individual project is to demonstrate your programming competencies in a digital humanities research context. It consists of three parts:

5. **Individual Project – Topic (submit a two-page single-spaced prospectus on bCourses):**
   The topic for this individual project is your choice and the only limiting factors are your abilities along with the scope and scale of your idea and the data. Think big, but then carve out a little slice of that big idea to focus on for this six-week course. **Use 10-12 point font.**

6. **Individual Project – Presentation (publish in your GitHub repository):**
   You are required to give a 5-minute presentation of your individual project. A functioning Jupyter Notebook is the only acceptable format.

7. **Individual Project – GitHub repository (submit URL on bCourses):**
   Publish your group and individual presentations to your GitHub repository. Include a README.md file that includes a: 1) title, 2) header image, 3) abstract of your group project, and 4) abstract of your individual project. Group members cannot use the same abstract – these abstracts must be written individually and include reflection about the collaborative process.

Schedule

Week	Date	Topic
1	May 24	Syllabus, example projects, ethics, and Jupyter Notebooks
	May 25	Python basics: Build your programming vocabulary
	May 26	Pandas data frames; Data formats (txt, csv, xml, json)
	May 27	Project day: Group assignments; individual topic brainstorm
2	May 31	*No Class: Memorial Day*
	June 1	Text data sources (Project Gutenberg and HTRC); Text preprocessing
	June 2	Data visualization: Histogram, barchart, boxplot, scatterplot, network
	June 3	Project day: Individual project dataset exploration; Group project questions
3	June 7	Introduction to geospatial data; GeoPandas
	June 8	APIs: Google Books, praw, tweepy
	June 9	Webscraping
	June 10	Example project: Walkthrough
4	June 14	Introduction to Bash and GitHub
	June 15	Machine learning: Jargons, preprocessing, regression, classification
	June 16	Machine learning: Document encoding; CountVectorizer and TfidfVectorizer
	June 17	Project day: Group project topics due; Individual topic and dataset due
5	June 21	Machine learning: Topic modeling; Word2Vec, BERT intro; Sentiment analysis
	June 22	Introduction to image processing and artificial neural networks
	June 23	GitHub/homework/work day
	June 24	Project day: Individual project focus
6	June 28	Group presentations
	June 29	Group presentations
	June 30	Individual presentations
	July 1	Individual presentations

Legal stuff – read this carefully!
Remember that you are bound to various codes of conduct. See the legal document in "Files" on bCourses. By enrolling in this class, you take full responsibility for your learning.